A Lecture
ON THE
RELATIONS OF PLANTS & ANIMALS TO INORGANIC MATTER, AND ON THE INTERACTION OF THE VITAL AND PHYSICAL FORCES.

Introductory to a Course of Physiology.

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GENTLEMEN,—In entering upon a great science like Physiology it becomes us to take as wide a survey of its several dependencies as is consistent with the knowledge of the epoch in which we live. It has therefore appeared to me that it might not be inappropriate on the present occasion *to consider organic beings in relation to inorganic matter, and the forces and affinities which weld, as it were, the organic and inorganic together in living organisms.* This seems necessary in an introductory lecture like the present; as it is of the utmost importance to familiarise ourselves at the outset not only with the matter from which, but the mode according to which, the several organisms and organs which it is the object of physiology to expound are formed.

The plant lives upon inorganic material, and the animal feeds on the plant or on some other animal nourished by the plant. Directly or indirectly, living organisms are linked to the globe they inhabit. It is impossible to speak of any one of the organic series as apart from the inorganic world, for the obvious reason that the same forces to a great extent enter into the composition of both. The grand scriptural *dictum*, "Dust thou art, and unto dust shalt thou return," is not more philosophical than it is physiological. It expresses in quaint but vigorous language those peculiar vital, physical, chemical, and other combinations and relations which bind living to dead matter. To trace those combinations and relations from their incipient beginnings in "*brut*," or inorganic matter, through the organic series, is the true province of physiology. In this wider and grander sense, physiology has to do with the universe and those beautiful physical laws which regulate the distribution and motion of matter. It has to do with embryology and the beginnings of life, whether by supposed spontaneous generation or from an accredited parent; it has to do with anatomy and zoology, regional and histologic; it has to do with chemistry and the myriad combinations and transformations incessantly going on between living and dead particles in vegetable and animal organisms; it has to do with physics and mechanics, with mathematics, with electricity, magnetism, heat, light, and a great number of kindred subjects, many of which are still in their infancy.

The relation between the organic and inorganic kingdoms, and between the vital, physical, and other forces, is of the most intimate description; and physiology, to be perfect as a science, must be all-embracing—i. e., it must occupy itself not only with living and dead matter, but also with vital, physical, and other force. The ancients, with a boldness and grasp worthy of modern times, regarded physiology as synonymous with the science of nature. With the Greeks, who coined the word, physiology was the λογος, reason or philosophy of φυσις, nature; that is to say, the generating and generated *cosmos*, world or system of the universe. It was, in short, the science of universal nature. In modern times, and especially among the Germans, what was thus expressed by the ancients has come to be expressed by the exactly parallel terms, *natur philosophie*, and *naturwissenschaft* (our natural philosophy).

During the last century the term "physiology" was restricted in its meaning not merely to the science of life and organisation, but more especially to the life and organisation of man. It thus came strictly to denote an all-important branch of medical science. During the present century it has been gradually widening its boundaries, and at the present day it holds out the prospect of an indefinable increase. There is now a physiology of man, a physiology of animals, and a physiology of plants. This increase has taken place contemporaneously with the enlargements in the fields of those sciences, such as botany, zoology, and human anatomy, which directly supply its subject matter; and of those other sciences, such as chemistry and all the kinetic branches of physics—e. g., electricity, magnetism, heat, optics, &c.,—which have become all-important aids in the investigation of many of the hitherto altogether mysterious processes of life and organisation. Physiology is consequently emerging from the comparatively confined and isolated position it occupied during the eighteenth century, and entering into a most intimate relation not only with the whole range of the natural sciences, but also with the whole range of the physical sciences; for with mechanical and dynamical laws, such as leverage and capillary action, it has as intimately to do as with the subtle physical powers of heat and magnetism. Physiology is thus plainly cosmic, or universal in its relations and dependencies. From the tendency which the circle of the sciences has to widen, it is impossible to draw a sharp line of demarcation between them. Already the little circles which indicate collateral branches are indenting each other, and the time will assuredly come when all shall merge and blend to form one grand whole. Then, and then only, shall we realise the important fact that all science, like all truth, is one.

Such being the nature of our great subject, it cannot be inappropriate in an introductory lecture to direct your attention very briefly to the cosmic or universal relations and affinities of physiology.

In ancient Greece it was customary to regard all matter as consisting of four elements—viz., earth, air, fire, and water. The elements now, owing to the rapid advance of chemistry and the judicious use of spectrum analysis in the hands of Bunsen and Kirchoff, amount to sixty-five.

Thales believed that the secret of life was to be found in the water; Anaximenes was of opinion it resided in the air; Pythagoras traced it to heat, and Xenophon to the earth. Hippocrates went further, and asserted that φυσις (Nature) presided over and controlled all the actions of the body. According to him, Nature assimilated what was good for the body and rejected what was bad. Plato, still more daring, attributed a soul to man, consisting of three parts—namely, the knowing or cognitive faculty, seated in the head; the passions, placed in the breast; and the appetites, confined to the belly. Aristotle entertained similar views. The soul, in Aristotle's opinion, was the vital energy or power which animated all organic bodies. Thus, with him, there was a vegetative soul for plants, a sentient soul for animals, and a rational soul for man.* Plato and Aristotle, with a weird wisdom, drew a broad line of demarcation between matter, life, and spirit. Democritus and Epicurus, who believed in none of these things, regarded the body as an accidental aggregation of stray particles, variously grouped, and consequently discharging dissimilar functions. In Democritus and Epicurus we behold the materialist of modern times; in Plato and Aristotle the immaterialist.

It is exceedingly interesting and, I will add, exceedingly instructive to trace those ancient doctrines rising gradually from matter to life and from life to spirit or soul, but I will not tax your patience; suffice it to say, that the ground originally occupied by Plato and Aristotle on the one hand, and by Democritus and Epicurus on the other, is vigorously maintained by two rival schools of modern philosophers. Thus there are those who attribute everything that exists to a spiritual agency, or, what is the same thing, a divine power; while there are others who persistently maintain that the universe and all it contains is due to an accidental assemblage of parts mutually acting and reacting upon each other. Newton and Swedenborg, e. g., support the former view, and Haeckel and Tyndall the latter. These four philosophers equally assume the existence of matter for their systems of the universe, but there is this fundamental difference between them: Newton and Swedenborg attribute the disposal, arrangement, and movements of matter directly to divine interposition and agency; whereas Haeckel and Tyndall refer everything to a power inhering in the

* Strictly speaking, Aristotle held that man, while possessing, in common with the brutes, a ψυχη, possessed also a νους, or rational principle.

matter itself. In other words, Newton and Swedenborg admit that matter, once created and placed in certain conditions, will obey certain laws; they, however, deny that matter can accomplish anything of itself, which is the position defended by Haeckel and Tyndall.

Newton's conception of the universe is very grand. He pictures a mighty chaos, matter without form in the illimitable void. He then represents it as assuming shape and falling into position by the force of gravitation and under divine guidance. The assuming of shape is the origin and order of movement. By motion thus produced the universe becomes gradually perfected; the relative size, distances, and movements of its several parts can be accurately ascertained.* Newton never loses sight of a first cause. Thus, speaking of the formation of the sun and fixed stars, he says: "I do not think (this) explicable by mere natural causes, but am forced to ascribe it to the council and contrivance of a voluntary agent." Numerous other passages of a like tenor might be cited from this author.†

Swedenborg in like manner, when descanting of gravitation, attributes the disposal of matter to divine agency. He says that nothing can be truly known of the visible world without a knowledge of the invisible, for the visible world is a world only of effects, while the invisible, or spiritual, is a world of causes.‡

Haeckel gives a very different and not over-cheering account of the Creation. It is too long to quote on the present occasion, but I may state briefly that he refers not only the origin of the primitive cell, but also that of the young earth, to condensation and rind-formation. He does not recognise a First Cause. He says: "The homogeneous, viscid, plasma substance, which singly and alone formed the bodies of the first organisms, and even at this day quite alone forms them in the case of the *moneres*, or simplest amœbic forms, is analogous to the tenacious and viscid planetary substance which contains the elements and substance of the young earth, as well as of the other glowing world bodies.....In both cases the form of the creation happened, not through the capricious interference of a personal Creator, but through the original power of matter fashioning itself. Attraction and repulsion, centripetal force and centrifugal force, condensation and rarefaction of the material particles, are the only creative powers, which at this point lay the foundations of the complicated structure of creation."§ Thus speaks and writes Haeckel. His system is not more intelligible for having excluded the divine agency. It is principally remarkable for bringing us face to face with the hydra-headed, myriad-handed protoplasm, and with the primitive cell, regarding which we have heard so much in recent times. Haeckel, it will be observed, holds extreme evolutionist views. According to him, matter does everything of itself and for itself.

Tyndall is equally extravagant in his opinions. In the region beyond the microscope limit, he says, the poles of the atoms are arranged—that tendency is given to their powers; so that when the poles and powers have free action, and proper stimulus in a suitable environment, they determine first the germ and afterwards the complete organism.

From the foregoing it will be evident that philosophers are diametrically opposed to each other as to the constitution of the universe: one sect attributing everything to divine agency and to law and order impressed upon all matter, whether living or dead, from the first; the other believing that matter of itself can account for the universe and all it contains. Both sets of philosophers, however—and this is the point with which we as physiologists have to do,—equally believe in matter and force.

At the very threshold of physiology we have to do with the so-called proximate principles of the body—i. e., the substances which enter into its composition. We have also to do with the vital, chemical, and physical forces which aggregate and work up the proximate principles into a consistent living whole.

The proximate principles have been divided into the *inorganic*, comprising such substances as water, chloride of sodium, chloride of potassium, carbonate of potassa, phosphate and carbonate of lime, &c.; and the *organic*, under which may be enumerated starch, sugar, fats, fibrin, albumen, casein, pepsine, &c. The inorganic substances are found both within and without the body; the organic substances being confined to it.

The organic substances are, so to speak, manufactured from the inorganic by plants and animals. A plant to live must be supplied with soil, with water and air. The soil contains saline matters, to which are generally added decomposing substances, which furnish carbonic acid and ammonia. The water furnishes oxygen and hydrogen in chemical combination; and the air oxygen and nitrogen, and small but important quantities of carbonic acid and ammonia. The plant is thus supplied with water, salts, carbonic acid, and ammonia. But the plant can disintegrate the carbonic acid and appropriate its carbon, which it can subsequently build up with oxygen and hydrogen into sugar, oil, and starch; or it can combine carbon, hydrogen, oxygen, and nitrogen to form those peculiar nitrogenous substances recently known as protoplasm. The sun lends its aid to the plant in these transformations; in fact, the heat of the sun enables the plant to separate the oxygen from the carbon and the nitrogen from the hydrogen in the formation of sugar, oil, and starch. The heat of the sun is, marvellous to relate, not lost in the process. It is stored up in the newly formed sugar, oil, and starch; and may be reconverted into heat either by burning in the animal body or in an open fire. The heat thus obtained can, when collected, be made to perform a definite amount of mechanical work. The physical and vital forces are correlated and interact.* Sugar, oil, and starch are manufactured by a vital chemistry, and, when once produced, are appropriated, with other substances, as food by the herbivora, and subsequently by the carnivora and omnivora. By vital, chemical, physical, and other forces the inorganic material of the outer world is incorporated in the organic or inner world of the individual.

The animal, built up, as it were, indirectly from the inorganic and directly from the organic kingdoms by means of the plant, reverses the operations of the latter. It returns to the inorganic world the substances abstracted from it by the plant. Thus the animal takes the complex bodies produced by the plant and oxidises or burns them. It restores the carbon of these bodies to the atmosphere chiefly in the form of carbonic acid, the hydrogen as water, and the nitrogen with the remainder of the carbon as urea, to the soil.

While these transformations are going on in the animal body the tissues are being built up and conserved, secretions formed, and work done. This work may be either mechanical or mental, or both. The animate and inanimate kingdoms plainly interact. The plant lays the inorganic world under contribution, and the animal lays the vegetable world under contribution; but the animal in due time restores to the inorganic or mineral kingdom, in undiminished quantity, the substances abstracted from it by the plant. In like manner the energy displayed by the animal is to be regarded as the sum of the potential energy stored up in chemical compounds; and this, in turn, is restored to the outer world as heat, which, like the matter, is undiminished in quantity. There is therefore a cycle of force and a cycle of matter in living beings. "Animals, like machines, can only move and accomplish work by being continuously supplied with fuel (that is to say, food) and air containing oxygen; both give off, again, this material in a burnt state, and at the same time produce heat and work. All investigation, thus far, respecting the amount of heat which an animal produces when at rest is in no way at variance with the assumption that this heat exactly corresponds to the equivalent, expressed as work, of the forces of chemical affinity then in action. As regards the work done by plants, a source of power in every way sufficient exists in the solar rays which they require for the increase of the organic matter of their structures." †

It would be quite out of place to refer to the great physical law of the conservation of energy on the present occa-

* "From the time when Newton discovered, by analysing the motions of the planets on mechanical principles, that every particle of ponderable matter in the universe attracts every other particle with a force varying inversely as the square of the distance, astronomers have been able, in virtue of that one law of gravitation, to calculate with the greatest accuracy the movements of the planets to the remotest part and the most distant future, given only the position, velocity, and mass of each body of our system at any one time."

† Newtoni opera omnia, p. 430. London, 1782.

‡ Life of Swedenborg, p. 17. New York, 1854.

§ Haeckel: Natürliche schöpfungs Geschichte. Berlin, 1868.

* "The life of men, animals, and plants could not continue if the sun had lost its high temperature, and with it its light."

† Popular Scientific Lectures by Helmholtz (1873), pp. 383, 384.

sion were it not for the fact that the law applies also to physiology. This law resolves itself into three parts—viz., the conservation of energy, the transformation of energy, and the dissipation of energy. We have examples of the conservation of energy in physiology wherever we have mechanical or physical adaptations* which produce a maximum of work with a minimum of power. We have examples of the transformation of energy in the muscles moving the bones, or the heart the blood; and we have examples of the dissipation of energy in the friction accompanying the movements of both bones and blood. In all the vital, physical, and chemical actions and reactions the law plays a prominent part. To take an example: A skilful blacksmith can hammer a piece of cold iron until it becomes red hot, and the iron so heated can be employed in raising steam and driving a steam-engine; but the muscles of the smith's arm are fed by animal matter, that again by vegetable matter, and lastly this by inorganic matter.† Similar results might be obtained direct from the inorganic world without the intervention of the smith's arm. Thus the heat in the universe causes water to evaporate, water evaporating is steam, but steam collected and confined propels the steam-engine.

The interaction of the physical, chemical, and vital forces is thus expressed by Helmholtz: "If a certain quantity of mechanical work is lost, there is obtained an equivalent quantity of heat, or, instead of this, of chemical force; and, conversely, when heat is lost, we gain an equivalent quantity of chemical or mechanical force; and, again, when chemical force disappears, an equivalent of heat or work; so that in all these interchanges between various inorganic natural forces working force may indeed disappear in one form, but then it reappears in exactly equivalent quantity in some other form. ..... The universe possesses, once for all, a store of force which is not altered by any change of phenomena, can neither be increased nor diminished, and which maintains any change which takes place on it. ..... The force of falling water can only flow down from the hills when rain and snow bring it to them. To furnish these we must have aqueous vapour in the atmosphere, which can only be effected by the aid of heat, and this heat comes from the sun. The steam-engine needs the fuel which the vegetable life yields, whether it be the still life of the surrounding vegetation or the extinct life which has produced the immense coal deposits in the depths of the earth. The forces of man and animals must be restored by nourishment; all nourishment comes ultimately from the vegetable kingdom, and leads us back to the same source. ..... We are thrown back upon the meteorological processes in the earth's atmosphere, on the life of plants in general, and on the sun."‡ It would appear from this that living force can generate the same amount of work as that expended in its production.

From what has been stated, it will be evident that Physiology is veering more and more round to Chemistry and Physics, and particularly the latter. The physiologist has at present to deal with the distribution of matter and force, not only in the individual, but also in the universe. It no longer suffices to say the muscles move the bones. The explanation now required is, What substances constitute and what forces actuate the sarcous elements?—for these we know move the muscles. In like manner we are not satisfied with the statement that a certain animal lives: the rising generation asks, Does the animal live by direct descent from a parent, or is it descended from a long line of ancestors dating back to the primeval mud of Haeckel? In other words, is each animal distinct and perfect from the first, or is each animal up to man himself an evolution from lower to higher forms, each improving upon its predecessor? These questions are difficult of solution, difficult even of comprehension, but they confront the physiologist of modern times. Herbert Spencer, one of the most advanced thinkers of the present day, avers "that the chasm between the inorganic and organic is being filled up, and that organisms are *highly differentiated portions* of the matter forming the earth's crust and its gaseous envelope." In like manner, Huxley, also in the vanguard of science, states that "protoplasm can originate only in that into which it dies—the elements—the carbon, hydrogen, oxygen, and nitrogen—of which it is found to consist. Hydrogen with oxygen forms water; carbon with oxygen, carbonic acid; and hydrogen with nitrogen, ammonia. Similarly, water, carbonic acid, and ammonia form, in union, protoplasm. ..... Protoplasm, then, is but an aggregate of physical materials, exhibiting in combination—only as was to be expected—new properties. ..... All vital action whatever, intellectual included, is but the result of the molecular forces of the protoplasm which displays it."* Protoplasm, according to Huxley, is the formal basis of life. It is the clay of the potter, which, bake and paint it as he will, remains clay, separated by artifice, and not by nature, from the commonest brick or sun-dried clod. Thus it becomes clear that all living powers are cognate, and that all living forms are fundamentally of one character. Huxley regards protoplasm as identical in composition and uniformly diffused in plants and animals—i. e., not contained in cells. In this he differs from the German histologists, who still regard the cell as the precursor and parent of protoplasm. With them "there is as yet no matter of life; there are still cells of life." Huxley claims for protoplasm a threefold unity—a unity of faculty, a unity of form, and a unity of substance. Each of these positions has been disputed, and properly; for how, say Huxley's opponents, can there be unity of substance if the elements, carbon, oxygen, hydrogen, and nitrogen, which constitute the protoplasm, are combined in varying quantity in different kinds of protoplasm? If there is not unity of substance there cannot be unity of form, and if there is neither unity of substance nor of form there cannot possibly be unity of function. The unity of substance of protoplasm depends for its proof mainly upon ultimate organic analysis. Ultimate organic analysis, however, teaches next to nothing in such cases. "Ozone is not antozone, nor is oxygen either, though in chemical constitution all are alike." Further, some protoplasm, in addition to carbon, oxygen, hydrogen, and nitrogen, contains a certain proportion of sulphur; and the Germans have shown that the cells which produce protoplasm contain in some cases glycogen, in others cholesterine, in others protagon, and in others myosin.†

Analogous in many respects to the protoplasm of Huxley is the bioplasm of Beale. This, as its name implies, is also an elementary life stuff. It is undifferentiated, and in this respect is identical with protoplasm. Beale and Huxley differ as to the mode of production of their elementary life stuffs. Beale affirms that they are the product of the *vital* forces *per se*;‡ Huxley of the *physical* ones. Beale attri-

* "There is hardly a natural process to be found which is not accompanied by mechanical actions, or from which mechanical work may not be derived—heat, electricity, magnetism, light, chemical forces, all stand in manifold relation to mechanical processes. ..... While the steam-engine develops for us mechanical work out of heat, we can conversely generate heat by mechanical forces."

† "A certain portion of force disappears from the sunlight, while combustible substances are generated and accumulated in plants, and we can assume it as very probable that the former is the cause of the latter..... The immense wealth of ever-changing meteorological, climatic, geological, and organic processes of our earth are almost wholly preserved in action by the light and heat-giving rays of the sun.....In the series of natural processes there is no circuit to be found by which mechanical force can be gained without a corresponding consumption."

‡ Helmholtz, op. cit.

* Huxley as epitomised by J. Hutchison Stirling, LL.D., to whose able critique on "Protoplasm" the reader is referred.

† According to Stricker, protoplasm varies almost infinitely in consistence, in shape, in structure, and in function. In some cases it is fluid, in others semi-fluid, in others firm and resisting. Occasionally it is disc-shaped, bottle-shaped, spindle-shaped, branched, prismatic, polyhedral, &c. One kind produces fat, another pepsine, another pigment. There is a protoplasm for each of the tissues—nerve, brain, bone, muscle, &c. There is, further, a protoplasm for the several kinds of plants and animals, each producing its own kind.

‡ His words are: "Force (i. e., physical force) is actually opposed to construction, and before anything is built up the tendencies of force must be overcome by *formative agency* or power. ..... The *vital power* transcends altogether physical forces; for it controls, guides, directs, arranges; while the latter *are controlled, are guided, are directed*, &c." (Life Theories and Religious Thought (1871), pp. 40 and 42.) In proof of the foregoing, Beale states that a tree grows against gravitation. This is quite true; but it is equally true that in such cases the physical forces of capillarity, osmosis, chemical affinity, &c., as I endeavoured to show in my "Lectures on the Circulation," are largely employed. The vital forces may override or bridle certain physical forces while they act in conjunction with others. In like manner nature may override or bridle one or more of the physical forces by employing stronger physical ones; but the physical forces subdued or inoperative for the time being are not on this account destroyed. They are ready for use when the proper time arrives. Capillarity and osmosis (purely physical forces) in certain cases overcome gravitation equally with the vital forces; but it does not follow from this that gravitation as a power is extinguished. When gravitation (and this remark applies to all the physical forces) is useful in building up the organism, it is employed by nature in conjunction with the vital forces; and when capillarity, osmosis, &c., are more convenient, they are preferred. The vital and physical forces must be regarded in their totality, nor must the object in view be lost sight of. Natural laws and forces (vital, chemical, and physical) act and react upon

butes all organisation to life, as apart from the chemical, physical, and other forces. According to him the bioplasm or germinal matter is the same always and everywhere, and consists of small masses of a structureless, colourless, and transparent viscid substance. Beale claims for his bioplasm or life matter similar properties to that claimed by Huxley for his protoplasm. To both the same objections apply. Beale grounds the homogeneity and identity of his bioplasm on microscopical research, and Huxley, as explained, upon ultimate chemical analysis. Neither, however, is trustworthy. Experience teaches us that the microscope is limited in its powers, and that chemical analysis, instead of simply disintegrating and breaking up a body into its ultimate elements, not unfrequently produces new combinations, and consequently new substances.

The grand fact remains that the germs and seeds of plants and the eggs of animals, apparently homogeneous and identical, invariably produce not only their own kind, but, during the process of evolution, substances which are altogether dissimilar. Even man himself, with his wealth of imagination and thought, is the product of an egg, which to the eye of the microscopist and chemist is, as to its several parts, homogeneous and identical. Yet this egg, with its several portions placed in exactly the same conditions, produces the tender pulp of the brain, the flaccid muscles, the tough tendons, the elastic cartilages, the hard bones, the still harder teeth; the enamel, a substance nearly as brittle as glass, and, in due time, the several secretions, the major portion of which is composed of water. To these are to be added the external skin, with its hair, nails, &c.; the internal skin or mucous membrane, with its numerous glands; the secreting and excreting organs; the nerves; the lymphatics; and the bloodvessels, with their contained blood, so rich, so complex, so marvellous in composition. These various products, so diverse in form, composition, and function, are, we know, the product of an egg. Shall we be told, or, if told, shall we believe that this egg is homogeneous and identical in all its parts and particles? Identical these parts may be to the eye of sense, but to the eye of reason they are not so. Matter similarly constituted, similarly disposed, and similarly conditioned—i. e., placed under precisely similar circumstances—behaves in precisely the same manner; in other words, all the parts are influenced alike. If life had to operate on absolutely identical matter, the living mass would be simply homogeneous—i. e., undifferentiated, and, if undifferentiated, it would have no power either to build up a plant or an animal. It is impossible to produce muscle, bone, brain, &c., from matter identical in ultimate composition. In the germ, the seed, the egg, even from the first, there is differentiation. The first embryonic changes are the result of this differentiation. It is this which enables the different parts of the embryo to attract and assimilate different substances and to build up different textures. One embryonic change involves another, and gradually the individual is evolved, each according to its kind. The weaver may not produce a web dissimilar in texture and pattern in the absence of dissimilar elements. He must be supplied with the warp, the woof, and the varied pigment. A queen bee may be formed from an ordinary grub by changing the quantity and quality of its food, but no amount of change in diet can produce from the same grub a dragon-fly or a locust.

In making these statements regarding the non-identity of protoplasm, bioplasm, and the several parts of the germ, seed, or egg, I do not mean to affirm that all the tissues enumerated are contained in the original germ, seed, or egg. Only this: that the original germ, seed, or egg is differentiated sufficiently to inaugurate the first series of changes, and that these inaugurate others in constant and rapid succession, until the plant or animal is completed. The first series of changes provides the materials and forces for the second, the second for the third, and so on, according to the degree of differentiation required in each particular organism. It is initial force and matter that are primarily required. Granted this, development in specific directions proceeds as a matter of course.

Chemistry and physics are not the whole of physiology. These sciences can conjure up an automaton, but are absolutely powerless when an ovum is desired. Dumas, a leading authority in modern chemistry, thus limits its province:—"The chemist has never manufactured anything which, near or distant, was susceptible even of the appearance of life. Everything he has made in his laboratory belongs to 'brut' matter; as soon as he approaches life and organisation he is powerless." "Organised matter, not capable of being crystallised, but destructible by heat, the only matter which lives or has ever lived—this matter, a subordinating agent of the vegetating power in plants, of the motion and sensation of animals, cannot be produced by chemistry; heat does not give birth to it; light continues to engender it under the influence of living bodies."*

The pretensions of the physicist may be disposed of even more cavalierly.

No machine hitherto devised by human ingenuity at all resembles or can at all compare in efficiency with a living organism when the consumption of material and the amount of work done are taken as the standard of comparison. A man is as far in advance of a steam-engine in this respect as day and light are of night and darkness.† If, then, neither the chemist nor physicist, nor both combined, can produce a living organism or anything even remotely resembling it, we are forced to fall back upon other than the chemical and physical forces, and the only ones we can under the circumstances fall back upon are the vital ones.

Life, there is every reason to believe, is an heirloom bequeathed from parent to offspring—a something superadded to dead matter; and motion in matter devoid of life is an emanation of force from the store of energy residing in the universe. Life, energy, and matter are equally distinct. Matter may be inert, or it may move under the influence of force, physical or vital. The physical and vital forces, however, are not to be confounded. An automaton is not an animal. While the vital and physical forces are independent, they are nevertheless correlated—i. e., the vital forces work in the same direction, and through the physical ones. A living organism builds itself up in accordance with natural laws, and avails itself equally of inorganic matter and physical force. The life supplies only part of the matter and force employed in building up an organism. The life, for example, appropriates and assimilates matter, but in doing this it does not necessarily interfere with capillarity, chemical affinity, gravitation, osmosis, or any of those influences or forces which regulate the distribution of matter in time and space. On the contrary, these are the instruments by which it makes itself known and felt. While living matter may and must be contra-distinguished from dead matter, there is no antagonism between them. What lives now dies hereafter, and the dead particles of a disorganised animal and plant may be, and frequently are, resuscitated. This arrangement equally adapts the organic world for the inorganic, and the converse. A living organism is incessantly taking in new and giving off old particles; it is a mysterious highway along which innumerable organic and inorganic atoms pass in the economy of an individual and in the natural order of events. Hitherto physiologists have been divided into two great classes—the vitalists and physicists. There is reason to believe that neither are wholly in the right, and that the truth lies between the two. It is illogical to infer with Beale that the vital forces are independent of, and altogether opposed to, the physical forces. It is equally illogical to assume with Tyndall that the physical are the only forces in the universe. If the vital forces act upon inorganic matter (and this is admitted), they cannot destroy the forces which actuate that matter as such. This follows because force, like matter, is indestructible. The vital forces transform matter, but do not destroy it. In like manner they modify, but do not destroy, the physical forces with which that matter is indissolubly associated. That the physical forces are not the only ones is

each other; and though at times some are inoperative, they are not annihilated, neither are they opposed when the final effect to be produced is taken into account. Organised structures are built up in accordance with natural laws. Thus their parts and particles consist of substances which naturally have a chemical affinity for each other; those substances absorb and respire—i. e., take in and give off fluids; they exhibit for the most part capillary spaces and interspaces in their interior; they have weight, porosity, elasticity, and various other purely physical properties. In this way chemical affinity, osmosis, capillarity, gravitation, &c., have free play, and each in turn assists not only in forming and maintaining the body, but also in disintegrating it. The vital forces, if I may be allowed the expression, use and abuse the physical ones. They do not, they cannot, annihilate them. As well may we say the vital forces annihilate matter.

* Faraday Lecture.

† Rumford long ago showed that a much greater quantity of work could be performed by a horse than could be performed by its food when employed as fuel in a steam-engine.

evident from this,—that they cannot of themselves, or in the hands of the most expert physicists, produce a living organism.

The vitalists are for the most part panspermists—i. e., they believe that everything that lives is produced from a parent by a germ, seed, or egg.

The physicists, on the contrary, are as a rule heterogenists—i. e., they are of opinion that matter can assume life in the absence of a parent.

The doctrines of panspermism and heterogeny will be most conveniently discussed together.

Heterogeny, otherwise known as "spontaneous generation," is an old doctrine, supposed to have been scientifically interred once and for all by Pasteur. Pouchet, Pentigazzi, Schaffhausen, Bennett, Bastian, Sanderson, and others, however, have of late been busily engaged in exhuming it. Pasteur, as many of you are aware, showed that if certain infusions were placed in flasks having long-drawn-out and bent but unsealed necks, and boiled, they could, if the necks remained intact, be kept for indefinite periods without producing organisms; but if the necks were broken off short and the atmosphere freely admitted, organisms appeared within a few days from the time the necks were broken. This was considered by the panspermists conclusive proof that the air contained germs, and that the organisms which appeared in the infusions within the flasks when the necks were broken off were due, not to spontaneous generation, but to development from pre-existing germs. The heterogenists, while admitting this to be the truth, deny that it is the whole truth. In other words, they give to Pasteur's experiments a different interpretation to that given to them by himself. They affirm that if other and more concentrated solutions than those used by Pasteur be employed, diametrically opposite results to those obtained by him may be produced; and that, in fact, the production of organisms and the peculiar character of the organisms produced is due, *not to germs* conveyed into them by the air, but to the nature of the infusions and organic solutions themselves.*

Pouchet, e. g., states that when three vessels severally charged with urine, cider, and a mixture of both, are exposed side by side, three distinct kinds of organisms are obtained, but that which occurs in the mixed fluid is a hybrid between the other two, deriving its mongrel qualities, *clearly not from the air*, but from the liquid menstruum.†

Bennett, who believes his experiments to be opposed to the atmospheric germ theory, attributes the production or non-production of infusorial animalcules in infusions less to the presence of infusoria, or their germs in the air, than to the physical conditions of that medium—viz., temperature, density, and other physical qualities.‡

Sanderson avers that "liquids which contain no particle distinguishable under the highest powers of the microscope can often be proved to possess the property of evolving microzyms (bacteria, &c.) after being boiled in sealed flasks without contact with external media"; and Bastian affirms that when infusions are of a highly fermentable order, and sufficiently strong, infusorial life is evolved even "*in vacuo*."§

These statements appear very conclusive as against panspermism, or the germ theory; and if the matter had been allowed to rest here many of us doubtless would have felt ourselves constrained to believe in spontaneous generation. Lister, however, who greatly resembles Pasteur in ingenuity, industry, and philosophical acumen, has, it appears to me, fairly turned the tide against the heterogenists. In a paper communicated to the Royal Society of Edinburgh last winter (1873) he showed that many of the forms believed by the heterogenists to be the result of spontaneous generation were neither more nor less than the transitional or developmental forms of certain fungi which could be planted and raised from germs. Lister in fact succeeded not only in planting the minute fungi in question, but, what is more important, he succeeded in tracing them through all their changes from the germ to the bud, from the bud to the perfect plant, and from the perfect plant back again to the bud. The material first operated upon was fresh—i. e., unboiled urine, procured by an antiseptic process in a perfectly uncontaminated condition. This urine was introduced into two wineglasses, supplied with porcelain lids, both of which had been heated far above the boiling point of water, and allowed to cool. When the wineglass with its contained urine was covered with a lid and placed under a glass shade, it remained for months without shadow of change either as regards the development of organisms or putrefaction. When, however, the glass shade and cover were removed, organisms of various kinds, and among them bacteria, soon made their appearance. The material next examined was Pasteur's solution, to which two drops of water from the tap had been added. When this fluid was exposed to the atmosphere, "a deposit which proved to be a minute filamentous fungus, producing abundant spores (conidia) on its branches, made its appearance. These spores, after separation, often produced young plants like the parents; but there were also seen in abundance precisely similar spores, multiplying by pullulation like a torula; and there were also present multitudes of more slender filaments, which were seen to break up into bacteria; while in several instances these filaments were observed springing from spores indistinguishable from those of the fungus."

The view that some filamentous fungi may give origin to both toruloid and bacteric forms (the latter endowed with vital movements) is new to science, and has done more towards establishing the truth of the germ-theory and annihilating that of spontaneous generation than any experiments with which I am acquainted.*

Lister, in his experiments, employed, in addition to the urine and Pasteur's solution referred to, white of egg, milk, turnip infusion, and other substances; but in every case with a precisely similar result. The importance of Lister's researches cannot be over-estimated. They are exceedingly interesting and instructive in a scientific point of view; but their scientific value is indefinitely enhanced by the fact that they have for their ultimate aim the relief of suffering humanity.

Spontaneous generation represents one phase of the "theory of evolution." The other is: given a typical plant, or a typical plant and animal, all plants and animals proceed therefrom by infinite permutations, extending over indefinite periods. In other words, the highest plants proceed from the lowest by a series of gradations; the highest plants and lowest animals merge into each other, and from the lowest animals the highest are ultimately produced. The latter doctrine is partly, but only partly, true. Plants and animals once created, endowed with vital powers and capable of reproducing themselves, may, under varying conditions and within certain limits, alter their several forms, and even their constitutions. I say within certain limits, for the variation is in no case indefinite. A horse remains a horse, and a dog a dog, whatever be the size, shape, and temper of those animals. While a horse and an ass are fruitful, their produce—the mule and hinny—are invariably barren. An animal may not depart from its original type indefinitely, and hope to perpetuate itself. This would introduce endless confusion. In reality, the limits within which reproduction is possible are exceedingly circumscribed, and confined in all cases to specific differences. The generic peculiarities remain always exactly the same under all circumstances. Civilisation is based on the capacity for variation within certain limits. Education proceeds on the possible progression of the individual.

The doctrine of evolution has had an unusually able advocate in Darwin, a gentleman whose industry and learning are only equalled by his integrity and courage. Darwin, with infinite ingenuity and quite a plethora of fact, has endeavoured to show that, given one or more fundamental forms, the innumerable tribes of plants and animals may

* Wymann, by working with small quantities of infusions in proportion to the size of his flasks, and consequently with relatively greater volumes of calcined air, hardly ever failed to develop organisms in exp riments which, in the hands of Pasteur, had produced none.—Evolution, p. 7.

† Hétérogénie. Par F. A. Pouchet. Paris, 1859.—Nouvelles Expériences sur la Génération Spontanée. Par F. A. Pouchet. Paris, 1864.

‡ The Atmospheric Germ Theory. By John Hughes Bennett, M.D. Edin. Med. Jour., vol. xiii., pp. 810-33, 1868.

§ In No. 6 of his experiments, Bastian states that active protamœbæ and ciliated monads were taken from a hermetically sealed flask, which eight weeks previously had been exposed to a temperature of 270°—275° F., and these very organisms were killed afterwards by a temperature of 140° F.

* Dr. Bennett states that "no one can carefully watch the mode in which infusoria are developed without being satisfied that they originate from the coalescence of molecules, and not from ova or spores, as has been imagined." This author regards bacteria as simply oleo-albuminous molecular masses, aggregated by physical forces. This view is, of course, diametrically opposed to that of Mr. Lister.—"On the Atmospheric Germ-Theory and Origin of Infusoria" (*Monthly Journal of Medical Science*, March, 1868).

proceed therefrom by natural selection and by infinite permutations in infinite time. In other words, separate acts of creation are not necessary to produce species, and it is just possible not even genera. Darwin's colossal idea does not necessarily clash with that of a creative agency—it simply regards creation as a progressive rather than a finished work.

External conditions, in Darwin's opinion, modify in the fulness of time both plant and animal, and both advance in the scale of being—i. e., plants and animals improve upon their former selves, the fittest always surviving. Darwin's law of the "*survival of the fittest*" affords another illustration of the interaction of the natural forces, for it shows that climatic, geological, and other physical changes modify the form and functions of plants and animals—in other words, modify and alter within certain limits the form and constitution of organic beings.

Darwin's hypothesis has thrown much light upon the complicated questions of natural affinity, the homologies of organs in various animals, and the recurrence in the embryos of the higher animals of structural peculiarities found in the lower ones. It has connected as by a silver thread the various paleontological forms in time and the several faunas and floras in space. It has endeavoured to establish an actual genealogy and consanguinity of organisms. As time advances, fresh links binding apparently irreconcileable types together are found, and in the old geological records of the past the actual transitional forms may be traced.

Few in the present day will doubt that many of the forms regarded by naturalists as distinct species of the same genus were originally derived from the same primitive form; but the major question is still *sub judice*. It is not yet determined that "all mammals are derived from one original marsupial, all vertebrates from a primitive lancelet, and all plants and animals from the slimy protoplasm of a protiston." If, however, this should be proved at some future period to be the case, it will simply have the effect of reducing the number of separate creations; it will not obliterate our belief in a great First Cause. It will neither impeach nor impugn the power of the Creator; still less will it disprove his continued operation through eternal and immutable laws.

Gentlemen, I fear I have trespassed equally upon your time and patience. The subject, however, chosen for this my introductory lecture demanded consecutive treatment. I could not consistently treat of the materials and forces employed in the organisation of plants and animals, and omit the great modern doctrine of "natural selection." The points which I have endeavoured to illustrate in the course of my observations are these:—

Firstly. That organic and inorganic matter are correlated and interact.

Secondly. That the vital and physical forces are correlated and interact.

Thirdly, and lastly. That living organisms cannot be produced from purely inorganic matter by purely physical forces.

I have only attempted a rough sketch. To-morrow and throughout the winter session I shall endeavour faithfully to fill in the details. Those details are very numerous and very complicated, but, to my way of thinking, very beautiful; and if I can only succeed in creating within you the same enthusiasm which animates myself, I am not without a hope that the finished work will turn out a labour of love.

A NEW CLASSIFICATION OF INSANITY.

BY JOHN CHARLES BUCKNILL, F.R.S.,
LORD CHANCELLOR'S VISITOR OF LUNATICS.

ALTHOUGH this subject has been treated with great learning and judgment by Dr. Daniel Hack Tuke in the Manual of Psychological Medicine, yet, considering the different kinds, forms, or species of insanity, I have failed to find all the assistance which I hoped for from some one or other of the existing systems of classification, especially in regard to treatment. Several of these systems are highly instructive on certain points—either, for instance, as to the psychical varieties, or the physical forms, or the pathological conditions, or, lastly, the natural groups, a small number of which undoubtedly do exist. Still I have not been able to find any one system which embraces all or nearly all the considerations which must be regarded in treatment. In this dilemma I was first tempted to state objections to the work which others have done, and especially to criticise the system of natural groups which has been most elaborated by my lamented friend the late Dr. Skae. But on reconsideration I have thought that, instead of finding fault with work which, however imperfect, is of undoubted value from one point of view, it would be more useful, if not more generous, to endeavour to construct a system of my own, which might more fully answer the purpose for which we needed it—namely, as a nosological scaffolding of form for the guidance of treatment.

My objections to the etiological system of classification I have stated at length in a review of Morel's classification;* and they apply in the main to Skae's similar but more elaborate one, which has been designated by Dr. Clouston, its able expositor, as a system founded upon the principle of "*the exclusion of everything mental or psychical connected with insanity.*"†

Without quoting these objections, I have the authority of the greatest intellect which has adorned our speciality—that of Griesinger—that "all classifications of insanity must again, in the end, come back to the principal psychological forms of mania, melancholia, and dementia, because they are actually founded in nature."‡ Moreover, the same high authority, in his introductory lecture, republished in the *Journal of Mental Science* (No. 48, p. 531), says:—"This consideration of mental diseases, from a psychological point of view, is both necessary and serviceable to a firm and constant connexion with the other aspect of the subject"—namely, its relation to practical medicine, and over and over again he points out that, in order to arrive at a practical diagnosis for the purpose of treatment, we must consider the psychical with the physical symptoms and the etiology. "The real problem for solution is to determine not merely the character of the mental aberration, but, as far as possible, the nature of the lesion of the brain and of the nerves." In the classification of insanity there are some forms, he says, which, in framing our divisions, we must refer to the psychical characters alone, for they are deficient in all other symptoms, but in other cases we are not bound to adopt this course alone. He appears fully to have recognised the principle, although he did not attempt to carry it into effect, that the classification of insanity should be made to depend upon a combination of the psychical characters and of the pathological conditions.

The novelty of the scheme of classification now proposed consists in the combination of psychical characters or phenomena with pathogenetic relations and pathological conditions; the first forming the Classes, the second the Orders and Genera, and the third the Species.

Since the *etiological* classifications of Van der Kolk, Morel, and Skae have been published, a most important step, in my opinion, has been taken in advance by the *pathological* classification of Dr. Batty Tuke;§ but even this thoughtful writer entirely omits all consideration of mental symptoms, and such an omission in a classification of mental diseases, seems to me somewhat like the omission of flowers and foliage in a botanical system.

In the formation of classes I have followed Griesinger's simple division into states of psychical depression, psychical exaltation, and psychical debility; substituting, however, the conventional and now thoroughly established terms of Melancholia, Mania, and Dementia.

I have reversed the usual order of mania and melancholia, because I believe that melancholia is the dominant psychical condition, and that Guislain was only wrong in being too exclusive in his theory that *prenalgie* was the source of all *phrenesie*. Idiocy I have relegated to a sub-class. Pinel included it in dementia, and it was only separated therefrom

* Journal of Mental Science, No. 38, p. 286. † Ibid., No. 87, p. 343.
‡ Die Pathologie und Therapie, &c., p. 121.
§ Journal of Mental Science, No. 747.

by Esquirol. Pathologically, the distinction between primary and secondary dementia is at least as great as between brain-defect occurring before and after infancy. Cretinism is not congenital but toxic dementia.

The foundation of the *orders* and *genera* on pathogenetic relations is no doubt a natural one, and I think it can scarcely fail to be practically useful by impressing on the mind the kind of relation which the mental disease has with the bodily condition; for the treatment of the patient, both as to mind and body, must necessarily depend to a very great extent upon this relation.

I do not presume to think that I have enumerated all the *genera* which, eventually, it may be found desirable to distinguish; and am well aware that the correctness of the position which I have assigned to some of the *genera* in the *orders* is quite open to discussion.

The inclusion of puerperal insanity in the Climacteric order is open to grave objection. This order, however, is intended to include vesanias which arise from or in conditions which are not pathological; and, although a deviation from bodily health generally precedes puerperal insanity, still the puerperal state can no more be considered necessarily a diseased state than that of puberty or old age. If there be a difficulty, the identification of *species* will resolve it, seeing that puerperal insanity may be septicæmic, anæmic, or neuralgic.

Of the *Species* there is little to say, except that they are the most important of all the divisions, and the most imperfect. Much has been left out which ought to have been admitted if knowledge had been sufficient. I trust, however, no condition has been admitted which ought to have been excluded.

Such conditions as are vaguely expressed by the Brunonian terms "sthenic" and "asthenic" have been omitted. The conditions of all the secreting organs have been omitted, simply from lack of sufficient knowledge; and the excess or defect of irritability of the muscles, which form such marked features in mental disease, have been omitted for the same very unsatisfactory reason.

On the other hand, the consideration of abnormal cerebral conditions which have not hitherto been sufficiently regarded in nosologies have been introduced. The ill-understood but undisputed state in which either the brain or the nerves, or both, wear away their physiological powers without interruption or repose, and its reverse, I have designated by the terms *hypertriptic* and *atriptic*—τρεῖβω, to rub.

The *hypertrophic* and *atrophic* conditions of nutrition are well defined, if not yet well investigated; but the *cacotrophic* is a wide field of inquiry, in which ground has hardly yet been broken. Sclerosis of the brain and of the spinal column is cacotrophic. How many varieties of it are there? If there is a paresic variety, is there not also a syphilitic one, and, may be, some others? In this division into species I claim the aid of the microscopic and chemical pathologist, for upon it is founded the all-important question of ultimate diagnosis.

The field for clinical research is the correlation of the classes, species, and genera; but, even while this correlation is in process of being worked out, any concrete case of mental disease which is assigned to its proper place in the divisions of this system will have attributed to it a succession of characteristics which will scarcely fail to aid in the more systematic knowledge of its nature and the more definite aim of its treatment.

If it should be objected that this system is a complicated and artificial one, like the botanical system of Linnæus, the validity of the objection will be fully admitted, with the proviso that a complicated system is needful for complicated and ill-understood phenomena. With larger knowledge a more simple and more natural system will take its place.

CLASSES *of Psychical Phenomena.*

1. Melancholia.
2. Mania.
3. Dementia.

SUB-CLASSES *of Psychical Combinations and Transmutations.*

1. Melancholia, simple.
2. „ combined with excitement.
3. „ with stupor (*dementia attonita*).
4. „ mania, and dementia alternating (*folie circulaire*).
5. Mania, simple.
6. „ with depressing emotions.
7. „ intercurrent with melancholia.
8. „ „ dementia.
9. „ alternating with sanity (*recurrent mania*).
10. Dementia, simple and primary.
11. „ consecutive on mania or melancholia.
12. „ congenital. Idiocy and imbecility.

ORDERS *of Pathogenetic Relations.*

1. Simple insanity. *Idio-encephalic.*
2. Allied insanity.
3. Sequential insanity.
4. Concurrent insanity.
5. Egressing insanity.
6. Metastatic insanity.
7. Climacteric insanity.

GENERA *of Pathogenetic Relations.*

Simple Insanity:

1. Insanity from hereditary predisposition.
2. „ moral influences.
3. „ intellectual overwork.
4. „ direct cerebral injuries.
5. Insanity of general paralysis (*encephalo-rachitis*).

Allied Insanity, influenced by other diseases, but independent:

1. Insanity with cardiac disease.
2. „ pulmonary disease, emphysema, phthisis, &c.
3. „ enteric disease.
4. „ renal and visceral disease, &c.

Sequential Insanity, caused by other disease which has subsided:

1. Insanity following idiopathic and exanthematous fevers.
2. Insanity following inflammations, as pneumonia.
3. „ injuries to the cerebro-spinal axis, apoplexies, &c.

Concurrent Insanity, caused by other diseases or diseased conditions which continue to exist:

1. Insanity from cachexias — syphilitic, chlorotic, cretinic, &c.
2. Insanity from epilepsy.
3. Insanity from chorea.
4. „ alcoholism.
5. „ masturbation.
6. „ starvation.

Egressing Insanity, growing out of the former disease, of which it is an exaggeration:

1. Insanity egressing from hysteria,
2. „ „ ecstasy.
3. „ „ hypochondriasis.

Metastatic Insanity, from the shifting or ceasing of other disease or suppression of discharges:

1. Insanity from rheumatism.
2. „ erysipelas and skin diseases.
3. „ suppression of habitual discharges, hæmorrhoids, or ulcers.
4. „ suppression of the catamenia.

Climacteric Insanity, caused by natural conditions of development and decline:

1. Insanity of the pregnant and puerperal state.
2. „ pubescence.
3. „ climacteric decline.
4. „ old age.

SPECIES *of Pathological Conditions differentiating the Genera by Pathological Conditions of the Brain and Nerves of the Blood and the Nutrition.*

Neurotic:

1. Hyperæsthetic.
2. Anæsthetic.
3. Neuralgic.
4. Sympathetic.
5. Apathetic.
6. Hypertriptic.
7. Atriptic.

Hæmic:

8. Hyperæmic.
9. Anæmic.
10. Septicæmic.
11. Uræmic.
12. Toxic.

Trophic:

13. Hypertrophic.
14. Atrophic.
15. Cacotrophic or cachectic.

ON PELVIC HÆMATOCELE.*

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PHYSICIAN TO THE HOSPITAL FOR WOMEN.

To a Society so eminently practical as the Harveian it might appear at first sight somewhat out of place to select for its consideration a disease of such confessedly rare occurrence as that which I have chosen for our discussion to-night. But if an apology be needed, I would urge, first, that pelvic hæmatocele being so rare appears to me an argument rather in favour of the choice I have made, because we are very apt, I think, on account of its rarity, to forget or overlook the symptoms which characterise this condition, and so to arrive at a faulty diagnosis. Secondly, I would remark that the treatment which is generally recommended for cases of this disease is not, in my judgment, the best that can be adopted in all or even the majority of cases; and I wish therefore to bring forward some facts which are, to my mind, conclusive in favour of a more active method of treatment than that usually pursued. It is, I think, of great importance, in a Society like this, in which all branches of the profession are represented, to discuss particular methods of treating a disease which is supposed to come more especially under the cognisance of one class of practitioners; we gain thereby the collective experience of men of widely divergent views and modes of practice, which may thus be made, as it were, to converge upon one point; and the result, I conceive, cannot but be useful to all. This remark applies especially, I think, to the subject under consideration, and to the mode of treatment I am about to advocate, because, as will appear, while I recognise fully the value and fitness of purely medical treatment in many cases of pelvic hæmatocele, I strongly advocate more active surgical interference in other cases which are usually treated by the slower expectant method. It is on this point especially that I would invite discussion and the experience of the members present, begging them at the same time, while criticising my treatment, to weigh carefully the facts and figures which I shall adduce in support of it.

Let me say one word in regard to the scope of my paper. As it is not possible for me in the time at my disposal to discuss the whole subject of pelvic hæmatocele, I propose to direct attention chiefly to its symptoms and treatment, and in regard to both of these I shall keep myself as closely as possible to the facts which I have observed in my own experience. For this reason I shall consider only that variety of the disease where the blood is effused into the peritoneal cavity; indeed I think it is better to limit the term *hæmatocele* to these cases, and to class under the head of *thrombus* those in which the blood is effused into the cellular tissue beneath the peritoneum. Such a classification is, I believe, in accordance with that adopted by surgeons in the case of the testicle, and it is, I think, a practically sound and convenient arrangement. I may say that I have never yet seen a case of the latter kind—viz., pelvic thrombus,—at least none in which I was able satisfactorily to diagnose that condition, nor have I ever met with it post mortem. From my own experience, then, I have seen nothing to satisfy me that such a condition ever exists, nor do I very well see how it is to be diagnosed from ordinary cases of acute pelvic cellulitis of a limited kind. I certainly do not believe that cases of this subperitoneal variety ever give rise to any considerable swelling. I very much question the statement that blood effused in this way into the pelvic cellular tissue may strip up the peritoneum, and give rise to a large pelvic or abdominal swelling. On the contrary, I believe that all cases where the tumour is considerable are cases of true intraperitoneal hæmatoceles: it is important to bear this in mind, because obviously it has a bearing upon the question of treatment, especially in its surgical aspect; at least I should have less hesitation in tapping a hæmatocele where I knew that the blood was effused and encysted in the peritoneal cavity than I should in puncturing a thrombus with the blood extravasated into the cellular tissue. The risk of mischief resulting is, I believe, far greater in the latter case than in the former. Such, at all events, is my experience in regard to tapping pelvic swellings.

Now, as to the trustworthy symptoms which will in general enable us to diagnose cases of true pelvic hæmatoceles, they are typically seen in the following case, which I have elsewhere recorded:—

Mrs. S——, aged thirty, married ten years, and has had two children, the youngest being three years of age, consulted me on November 14th, 1870, for a leucorrhœal discharge, which, she had been told, was due to an ulcer of the cervix uteri. On examination, I found that the uterus was large, measuring three inches in length; the mucous lining of the cervix was everted, and deeply injected, being what is called by some authorities in a state of granular erosion. All the culs-de-sac were entirely free from any deposit whatever. On the day following she went out to dinner, and, although it was very cold and wet, she determined to walk in her light evening dress to the house she was going to visit, which was only a few doors off. Menstruation was about due at the time, but was frequently irregular, so that she could hardly be sure of the date. She had scarcely sat down to dinner when she was seized with severe pain in the hypogastric region, which compelled her to leave the room; and she was carried home, feeling very faint and ill. Some hot brandy-and-water was taken at once, and warm fomentations were applied. The pain, however, continued with but slight abatement, and the next day I was called in. On examining per vaginam, I found a swelling behind the uterus, stretching across from side to side, and pushing that viscus slightly forwards; it also bulged a little into the vagina. There was extreme pain and tenderness in the lump, and also on deep pressure into the pelvis from above. The swelling was somewhat elastic, but more boggy. On the following day the swelling had increased; there was more pain; pulse 120, tongue furred, expression anxious. Nothing could be felt externally. Next day there was still greater increase and bulging of the swelling per vaginam, which now invaded the left side of the pelvis, pushing the uterus against the right obturator foramen. The pain was not so severe, but differed in that it was of a forcing, bearing-down character. The lump was more distinctly elastic, and I had no doubt that it contained fluid. It had pushed Douglas's pouch so low down as to be quite near the vaginal outlet, and might have been tapped with great facility, either per vaginam or rectum. On the fourth day there was slight aggravation of all the symptoms, with a relative increase in the size of the swelling, which, however, could only be felt externally on pressing into the pelvis. It did not rise above the level of the pelvic brim. There was no obstruction either of the bladder or rectum, though the bowels acted with difficulty and great pain, and only after aperient medicine. During the course of the next ten days the symptoms greatly abated, the pain diminished, and the swelling grew less and less, so that on December 14th, just a month after the commencement of the attack, it was noted that "there is hardly a trace of the lump left; but a kind of ridge may be felt behind the uterus, forming, as it were, a cast of the peritoneal fold in that direction." Even that ultimately disappeared, and when I examined her early in February nothing abnormal was discoverable.

On the 15th of that month, it being a menstrual period, she again exposed herself to cold, and was seized in almost precisely the same manner. I saw her the day after, and on examination I found that the uterus was depressed, pushed somewhat forwards and to the left side by a boggy, putty-like mass, which occupied the posterior and part of the right lateral cul-de-sac. Defecation was difficult, and extremely painful. There was very slight sanguineous discharge from the vagina, and violent bearing-down pain, as if everything would force from her. The swelling at no time appeared to be larger than a good-sized orange. A few days subsequent to this, and after a good deal of forcing pain, she expelled a small mass, which, on examination, proved to be nothing more than a decolourised fibrinous clot, entangling a good deal of uterine epithelium. After this she felt great relief; the catamenial discharge came on much more freely; the post-uterine lump began to diminish in size; and she made a rapid and complete recovery, so that when I saw her a few months afterwards the uterus was quite movable; no deposit could be felt in either cul-de-sac, and nothing abnormal was discoverable.

Now it seldom falls to our lot to be able to demonstrate,

* Paper read before the Harveian Society.

as was done in this case, the rapid formation of a post-uterine swelling coincidently with the occurrence of symptoms of acute pelvic inflammation. It so happened that a few hours before the attack came on I had the opportunity of examining this lady, and was satisfied that no pelvic swelling existed. A similar examination, made a few hours after the attack set in, showed the existence of a soft, elastic tumour behind the uterus, filling up Douglas's pouch, and pushing the uterus forwards against the pubis. Now there is no swelling or tumour that I know of in connexion with the female generative organs which can be formed so rapidly as this, except pelvic hæmatocele. This fact alone, therefore, was sufficient to warrant the diagnosis, and it was corroborated entirely by the accompanying symptoms. We cannot, however, reckon upon such opportunities as were afforded me in this case; and, in the absence of that knowledge, our diagnosis will be founded partly upon the history of the case and partly upon the character of the pelvic swelling.

As regards history, I find that in all the cases which have come under my care there has been a more or less distinct history of uterine or ovarian trouble, which has, as it were, led up to and culminated in the attack which now claims attention. This is more particularly observed in those cases where the hæmatocele is not directly and immediately connected with menstruation. In the majority of cases there is this connexion, and the hæmatocele results either from the regurgitation of the menstrual fluid from the uterus along the Fallopian tube into the peritoneal cavity, or else the afflux of blood which usually takes place to the generative organs at the time of menstruation leads to such an engorgement of the venous plexuses that rupture occurs at some point where either a varicose or other diseased condition existed, which predisposed to the catastrophe. In a certain number of cases—but they are, in my experience, very rare—the hæmorrhage occurs in connexion with pregnancy, or rather with delivery, either at term or, more commonly, prematurely, and especially during the earlier months. Probably in these cases the diseased condition, whatever it be, which gives rise to the hæmatocele after the abortion is the principal agent in bringing about the premature expulsion of the ovum. And here also careful inquiry will serve to elucidate the fact insisted upon—viz., the existence of symptoms of uterine or ovarian disease prior to the occurrence of pelvic hæmatocele. Indeed, I do not think it possible for such an accident, if I may so call it, to occur in a woman perfectly healthy in those parts. Happily for the patient, though unfortunately for science, these cases seldom end fatally, and our opportunities, therefore, of examining the parts and of demonstrating the origin of the mischief are few and far between. I believe that a varicose condition of the veins of the pampiniform plexus, resembling varicocele in the male, is of very common occurrence, and may have much to do with the disease we are considering. All this, of course, has reference only to antecedent history and to predisposing causes.

The symptoms which characterise the attack itself are generally very well marked, and although in themselves it would, perhaps, be difficult in some cases to distinguish them absolutely from those which occur in certain acute pelvic inflammations, such as cellulitis or peritonitis, yet in general there are important differences which, taken in connexion with a digital vaginal examination of the resulting pelvic swelling, are sufficiently characteristic to make the diagnosis a matter of tolerable certainty.

Probably the only conditions with which pelvic hæmatocele is likely to be confounded are pelvic cellulitis and pelvic peritonitis; but in regard to each of these there are some few points of dissimilarity in the character of the symptoms, and there are still greater differences in the local physical signs, especially in regard to the formation of the pelvic swelling, its situation, consistence, and general characters.

In all three, when fully developed, there are the usual signs of inflammatory action—namely, local pain and general febrile disturbance. To some extent they resemble one another in the mode of attack, but though each may begin rather suddenly, the symptoms of cellulitis and peritonitis are seldom so severe at first as hæmatocele; the pain of cellulitis is not nearly so sharp as that of the other two, and hæmatocele is generally the most severe of all. Faintness, great prostration, and even collapse to an alarming extent, frequently accompany the accession of hæmatocele; neither of these occurs in connexion with cellulitis or peritonitis. On the whole, it may be said that, taking average cases of these three affections, pelvic hæmatocele is characterised by symptoms which are more sudden, severe, and alarming than either of the other two—it, in fact, shows its traumatic character very distinctly; and pain, prostration or collapse, with symptoms of internal hæmorrhage, are its leading features. The pain is of course very local and limited, and it has a peculiar forcing, bearing-down character, a feeling which is described sometimes as if everything were being forced away.

With the occurrence of such symptoms, a vaginal examination will in general suffice to make the diagnosis clear. If circumstances have enabled us, as in the case already detailed, to demonstrate the sudden formation of a pelvic swelling, situate chiefly in the post-uterine region, that may be taken as conclusive evidence of hæmatocele; for not only does the swelling in cellulitis form much more slowly, but it differs also in situation and character. It is at first neither in front of nor behind the uterus, but on one side, originating as it does in the cellular tissue of one or other broad ligament. In pelvic peritonitis the swelling forms even still more slowly, is generally behind the uterus—not on one side,—and more limited in extent than either of the other two.

Again, there are differences in the character of the swelling. In hæmatocele it is at first tense, elastic, fluid, and fluctuating; as time goes on, it becomes boggy, doughy, non-fluctuating; then firmer and firmer, till it is almost hard, and with this change it contracts considerably, getting smaller and smaller, till it finally disappears. Cellulitis, on the contrary, is small at first, and gradually increases in size, becoming softer and more elastic as it increases. It sometimes changes its brawny character for one in which fluctuation can be distinctly made out. In all these respects it resembles pelvic peritonitis, and so far both differ from pelvic hæmatocele; but they in their turn differ from one another in this respect, that in cellulitis the swelling is one-sided, while in peritonitis it is situate either anteriorly or posteriorly.

Lastly, in cellulitis the uterus is usually displaced laterally, being pushed to one side by the swelling formed in the broad ligament of the opposite side; while in hæmatocele and in pelvic peritonitis the uterus is displaced forwards or backwards, but most commonly forwards, and much more so in hæmatocele than in peritonitis.

Such are the characteristics of the pelvic swelling in these three conditions. Their differences are in general sufficiently marked to enable us to diagnose them with tolerable certainty, especially when taken in connexion with the history and symptoms past and present. Neither the history nor the physical signs taken separately are in themselves sufficient to establish the diagnosis. Both must be taken together; but a minute and careful examination is of the utmost importance, not only for the purpose of diagnosis, but still more in reference to treatment, and especially in regard to that mode of treatment which I believe to be the best and most successful. I have a strong impression that if the symptoms and physical signs of pelvic hæmatocele were more generally understood and appreciated, we should find that cases of this affection are more common than is generally supposed, and that it is not such a medical curiosity as some imagine. Cases of pelvic cellulitis, pelvic peritonitis, and pelvic hæmatocele have no doubt just sufficient in common to make an error of diagnosis pardonable; but I would venture to hope that mistakes of this kind may be less common in the future as the disease becomes better understood.

(To be concluded.)

URETHRO-VESICAL CALCULUS.

By SURGEON-MAJOR A. R. WAGHORN, M.D.,
LATE OFFICIATING CIVIL SURGEON, MIRZAPORE, N.W.P.

THE following case is interesting, not only on account of the position of so large a stone, but from the rapidity with which the wound healed in a boy with such broken health:—

The patient, a boy aged thirteen years, was admitted into the Civil Dispensary at Mirzapore on the 25th May, 1871.

Caste, Mullah; very much reduced; urine muco-purulent, and contained a large amount of whitish earthy particles; it dribbled constantly, keeping the clothes and thighs always wet; bladder very much distended and never empty; general health very unsatisfactory.

He was examined on the morning of his admission. A stone was detected firmly impacted in the urethra close to the neck of the bladder, and all my attempts to push it back into the bladder failed.

On the morning of the 26th May, the patient having been prepared in the usual manner, I performed the lateral operation. The smallest staff was with great difficulty passed into the bladder beneath the stone. The stone had not formed any adhesions, and was readily removed. It was of a dumb-bell shape, and weighed just over an ounce. The vesical portion of the stone was rather larger than the urethral, and projected upwards into the bladder, forming with the neck and urethral portion almost a right angle. In length it was exactly 2 inches; circumference of vesical end 3¼ inches; circumference of urethral end 3¼ inches; and circumference of neck 2⅜ inches.

Annexed is a sketch of the stone, which is now in the Museum of the Royal College of Surgeons of England. Originally, perhaps, a long thin stone, it had found its way

V, Vesical end. U, Urethral end. N, Neck.

into the urethra, and, there becoming wedged, had grown into its present form; increasing most at those points where least resistance was offered, the vesical end had grown upwards, and the urethral appears to have grown most in length and downwards.

The patient rapidly improved. In the course of the first week the urine took its natural channel, and before the end of the second the wound was quite healed. The water dribbled away for some time after, owing to the partial paralysis caused by the long-continued dilatation of the neck of the bladder by the lodgment of the stone there; but under the use of the tincture of perchloride of iron, strychnine, and dilute hydrochloric acid a perfect cure was effected, and the boy discharged on the 17th June, 1871.

Watford, Herts.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

AXILLARY ANEURISM; COMPRESSION; CURE.

(Under the care of Mr. ERICHSEN.)

AXILLARY aneurism, though rare, is always of serious import, as spontaneous cure is almost unknown, and the results of surgical interference have not hitherto been very satisfactory. The operation for the ligature of the third part of the subclavian for aneurism of the axillary artery is frequently attended with great danger, or is followed by such fatality that it would hardly be justifiable if other and safer means could be shown to exist. Syme's treatment is evidently unsuitable for the majority of axillary aneurisms. Compression alone therefore holds out a hope of success. But mechanical compression is generally difficult and painful, and compression by the fingers can only be systematically carried out where there is a large staff of students or assistants. Up to the present time there are not more than five recorded cases of the cure of axillary aneurism by compression; of these only two were cured by digital compression. In the following case, for the notes of which we are indebted to Mr. Floyd Collins, ward clerk, compression was applied altogether for twenty-five hours—digital compression for eleven hours, and mechanical for fourteen.

Chas. W——, a plasterer aged seventy-one, was admitted June 16th, 1873, with aneurism of the right axillary artery. The patient first noticed a pulsating swelling just below the clavicle a month before. From this time he experienced pain in the right arm and occasionally numbness in the right hand, but he continued to work at his trade. He is a muscular, well-made man, and has always had good health, but since the appearance of the tumour has been subject to attacks of giddiness.

On admission there was a large tumour under the right clavicle, extending in a curved line, from two inches from its sternal end to about an inch and a half from its acromial end. The centre of this curve was about three inches below the clavicle. Eccentric pulsation was very apparent over the whole surface of the tumour. A strong thrill could be felt at each heart-beat, and a loud rasping bruit was heard with the stethoscope. The arteries of both arms, especially the right, were very tortuous and atheromatous. The pulse at the wrist was almost, if not quite, as distinct on the right as on the left side. The right hand was slightly numb, and the right arm painful, the pain being less in the recumbent position. The superficial veins were very prominent in both arms, but more especially in the right.

June 23rd.—Digital compression was commenced to-day at 3 P.M., and continued for two hours.

24th.—Compression was recommenced to-day at 10 A.M., and continued for two hours, and again from 3 P.M. until 5 P.M.

25th.—The artery was compressed again to-day for two consecutive hours.

27th.—The tumour is larger than before—that is, more prominent. It feels harder, and there is still a thrill in it, but the pulsation appears less forcible, and less superficial.

28th.—No compression was exercised yesterday at all. The arm, forearm, and fingers are all tightly bandaged, and give pain.

30th.—The limb is kept bandaged as before. The size of the tumour appears to be smaller than on the 27th inst., but the pulsation is as strong as before. Patient feels shooting pains extending from the aneurism down the arm, and backwards through the upper part of the back between the shoulders.

July 4th.—Distensile pulsation decidedly weaker than on admission, as is also the thrill. The tumour occupies a larger amount of supra-clavicular region than at first. Very moderate compression of the subclavian artery on the first rib controls expansion, and checks the bruit entirely.

5th.—Compression was made again to-day from 3 to 6 P.M., the patient being kept under chloroform the whole time of the operation. Temperature 98·2°; pulse 70.

14th.—When the clavicle is well raised there is a thrill still perceptible, but decidedly weaker; expansion has also decreased. The tumour is considerably enlarged above the clavicle. The radial pulse is quite imperceptible, but that in the brachial artery can be felt; tongue dry and furred. Temperature 98·2°; pulse 68.

19th.—Yesterday afternoon an instrument was applied to compress the artery against the first rib. It consists of a square board, well padded, and having crutches fitting the axillæ to keep it in place. On this the patient lies. On the right side a curved iron arm overhangs the tumour, and into this a screw compressor is fitted with a ball-and-socket joint. The pressure exercised is regulated by india-rubber bands. Compression was only continued for an hour, as the patient was not under chloroform, and complained very much of the pain it caused. This morning there is decidedly less pulsation and thrill, but these are very variable, being almost imperceptible at times. Temperature 98·8°; pulse 70.

21st.—Yesterday afternoon pressure was again applied by

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the instrument for five consecutive hours, the patient being under the influence of chloroform. On the removal of the instrument both pulsation and thrill were perceptible, but after a time ceased to be so, the tumour feeling harder. This morning, however, both can readily be felt. The radial pulse is perceptible to-day. The pulsation and thrill are much stronger when the clavicle is raised than when it is depressed. Temperature 97°; pulse 60.

23rd.—The pulsation and thrill are a little stronger this morning. Patient complains of his arm feeling quite dead. Temperature 97·4°; pulse 66.

28th.—The compressor was again applied on the 26th from 1 P.M. until 9 A.M. The patient was under chloroform until 7 o'clock, and after that a hypodermic injection was given. The pulsation and thrill are certainly less this morning, but there is still sufficient to render the radial pulse perceptible. Temperature 97·6°; pulse 76.

31st.—The patient appears to be losing control over his mental faculty, and makes very strange remarks. He is very weak. Temperature 97·8°; pulse 70.

Aug. 2nd.—Patient had a fit last night, which lasted for a quarter of an hour. He screamed at first, and this was followed by spasmodic contraction of the muscles of the limbs, snoring and difficulty of breathing. He has never had a fit before, but he has a brother who is subject to them. The impulse and thrill in the aneurism are as great as before, and the radial artery is distinct. Temperature 98·4°; pulse 72.

5th.—The patient was delirious yesterday, and has to-day a very vague way of expressing his ideas. Temperature 97·8°; pulse 64. No change in the aneurism.

11th.—There has been great pain in both arms during the night, and the pulse and temperature are higher than usual. The pulse at the wrist is not perceptible to-day, but the aneurism remains the same. Temperature 99·2°; pulse 72.

12th.—The pulsation and thrill in the tumour are much less to-day, and when the patient was first examined could not be felt. Patient himself says there has been no throbbing for ten hours. There is much less pain and more power in the arm. Temperature 98·4°; pulse 72.

15th.—The radial pulse can just be felt-to-day, but there is no pulse in the brachial artery at the elbow. There is a very slight thrill in the tumour, but the pulsation there is doubtful. Temperature 97·4°; pulse 64.

19th.—An ice-bag has been applied to the tumour to-day. There is very slight pulsation, and the thrill remains unchanged.

23rd.—The ice-bag has been removed to-day. The pulsation and thrill are scarcely perceptible. The patient is to get up, and to have a pint of stout daily. Temperature 97·8°; pulse 78.

26th.—The pulsation cannot be felt to-day, and the thrill is scarcely noticeable. The movement of the arm is much freer, and its sensibility is also increased. The veins do not appear to be so congested as before.

Sept. 1st.—Very slight pulsation to-day, but the thrill is somewhat more marked in the upper part of the tumour. Temperature 98°; pulse 72.

13th.—There is no perceptible pulsation or thrill to-day, and the sensation and power in the arm appear to be quite restored. Temperature 97·6°; pulse 80.

20th.—Pulsation and thrill have quite disappeared; but the patient complains this morning of greatly increased pain in the arm and hand, which are slightly swollen, and rather dark in colour. Temperature 98·4°; pulse 80.

Oct. 6th.—The arm affected by the tumour has not quite so much power as the other, but does not seem to have wasted at all. The fingers are still a little cramped.

14th.—Patient discharged to-day.

VICTORIA HOSPITAL FOR CHILDREN.

THE following operations were performed at this hospital on Saturday week.

The first case was one of a large chronic abscess of the back in connexion with caries of some of the dorsal vertebræ. Mr. Cowell for the second time emptied the cavity with the aspirator, the abscess being on this occasion very little more than half the size which it presented at the time of the first operation.

The next case was one of excision of the knee, in consequence of old-standing chronic inflammation of the articular extremities of the bones, in a boy nine years of age. The knee was considerably enlarged, but in a perfectly quiet condition; but the contracted and bent position of the joint rendered the limb a useless one. An attempt had, several months before, been made elsewhere to straighten the limb, and Mr. Cowell pointed out that the effect of the proceeding had been to dislocate the epiphysis of the tibia, and not in any way to diminish the angle of contraction. Such a result ought most carefully to be avoided, because dislocation of the epiphysis was often followed by some arrest of development of the bone. Mr. Cowell made a crescentic incision, and removed the patella, although it was not in any way diseased. Some difficulty was experienced in adapting the bones, in consequence of the tilted position of the tibial epiphysis. The operation was entirely bloodless, an ordinary bandage having been previously firmly applied from the toes to the upper third of the thigh, and a solid india-rubber cord applied round the thigh at its upper border. Not a drop of blood was lost until the cord was removed, when the skin of the limb, and of course the edges of the wound, assumed the bright blush produced by the free entrance of blood into the capillaries; the temporary loss of tone of the capillaries being probably the result of the previous pressure on the nerve-trunks.

In the next case, which was that of a boy eight years of age, suffering from hip disease of the left side, Mr. Cowell excised the head of the femur with the great trochanter. The boy had been in the hospital about two months, with a sinus opening on the inner side of the thigh. On admission there was considerable pain, and the thigh was flexed nearly at right angles to the abdomen. This was straightened, and several adhesions broken down, under chloroform, sufficiently to allow of the application of a long splint. The immediate effect was to diminish the pain and discharge, and the improvement was for a time most marked; both symptoms, however, gradually returned. Mr. Cowell remarked that, in making a careful examination of the joint at his last visit to the hospital, he again failed to reach carious bone with a probe; there was a subdued crepitation felt in the joint, but as a rule he abstained from performing the operation until the disorganisation of the joint could be demonstrated by the probe as well as by crepitation, the latter alone being not always trustworthy. Mr. Cowell considered himself justified in making an exception in the present case. A straight incision was made behind the trochanter; the joint was readily reached, and the head of the bone and great trochanter were protruded from the wound and sawn off, as much as possible of the periosteum of the trochanter and neck having been saved. Several pieces of loose bone were removed from the acetabulum. There was very little bleeding. Silver wire sutures were used, and after conveying the boy to bed, extension by means of a weight of about 1½ lb. was applied. The whole of the articular cartilage of the head of the bone had disappeared, as also that lining the acetabulum.

The last case was an excision of the head of the femur by Mr. Churchill. Some bone had on a previous occasion been removed by him from the margin of the acetabulum. The discharge had again become profuse, and the joint, which had at one time been partially anchylosed, had become disorganised. A similar incision was made in this case, and the head of the femur with the trochanter was sawn off. There was some troublesome hæmorrhage from some gluteal branches, which necessitated plugging the wound.

We understand that up to the present time all these cases are progressing most favourably.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

NEPHRITIC RETINITIS.

(Under the care of Mr. JABEZ HOGG.)

THE following notes have been taken by the house-surgeon, Mr. Amiraux Godfray.

The patient, a young man aged eighteen, of pallid complexion, tall, but of slight and delicate frame, bearing marks of old strumous abscesses in the cervical region, was admitted July 16th, 1873. He is a bill poster by occupation, and has followed that calling for the last six years. He is

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engaged at work twelve hours per diem, and walks about twenty-four miles during that time, carrying with him 12 lb. of materials used in posting. He is accustomed to heavy drinking, getting drunk every other day; has drunk, on an average, two gallons of strong ale a day. Has never had delirium tremens. Has smoked much ever since the age of eleven—an average of half an ounce of tobacco a day. Has been getting thin of late, and has a cough. His father died of dropsy, due, he says, to asthma, under which he laboured for twenty years. The patient has never had scarlet fever or rheumatism, or any severe illness, epistaxis, or syphilis; no diarrhœa—constipation as a rule. His arteries feel tough, but no atheroma was found at the post-mortem examination. He never noticed puffiness of face or feet, or had anasarca, or scantiness of urine, or lumbar pain. Until six weeks ago he had not observed the increased frequency of micturition. Whilst in the hospital the amount of urine never exceeded four pints, of which a pint and a half was passed between 6 P.M. and 6 A.M.; specific gravity 1010; very pale and watery; and no albumen was ever found in it, although tested daily, and sometimes twice daily; nor could any tube-casts be seen.

Vision more than usually acute a couple of years ago, when he went by the *soubriquet* of "Hawk's-eye"; but it has been rapidly failing for the last six weeks, since which date he has suffered from almost constant and at times unbearable headache. During the last fourteen days he has had frequent feelings of faintness at intervals, with occasional attacks of morning sickness of yeast-like matter. He has been somewhat drowsy for this last week, and frequently he was noticed to be asleep in the ward, when a moment before he was awake and chatting to those around him. He did not wander at night whilst in the hospital, or snore loudly. He did not become more amblyopic, but, on the contrary, his vision was beginning to improve. He noticed of late gradually increasing difficulty in reading, having to approximate more and more, this approximation increasing *pari passu* with the amblyopia. Vision on admission: Left, $\frac{1}{100}$; right, $\frac{1}{100}$; with excentric fixation = $\frac{1}{7}$; could just read No. 20 of Jaeger with one eye. The heart was noticed to be greatly hypertrophied, its action jarring violently at each beat the thoracic parietes. No murmur.

Ophthalmoscopic appearances on admission.—Media clear; discs of natural colour, but very hazy. At the margin the haziness extends for half the width of the disc into the adjacent retina. Veins large, tortuous, and slightly varicose; numerous patches of fatty degeneration of the rods of Müller, thickly studded over posterior pole of the eye and around the disc. The patches vary in size; mostly softened in their outline; some are ovoid, others angular. Periphery of both eyes free. No hæmorrhages to be seen on admission; the following day a few were present, and they slowly increased, but vessels much more numerous than usual. Venous pulsation in a big vein going downwards. At the yellow spot in each, but decidedly more marked in the right eye, there are numerous fine, glistening, radiating, isolated streaks, arranged in a semicircular form around the macula, their bases seeming to converge towards the macula. A large whitish mound in immediate contact with disc, and to apparent outer side, is to be seen in the right eye. The alterations seen in the region of the yellow spot were of the most characteristic kind, and from their appearance alone sufficed for diagnosis a few hours prior to his death. Ophthalmoscopic examinations made by Mr. Power and Mr. Hogg showed that the white patches had very much increased since the day before, and two hours after this the fundus was described as thickly studded with them, showing the rapidity of their formation. Innumerable large and small hæmorrhages were to be seen then from vessels of medium size, the rending of which could be actually seen. The discs became very hazy, arteries almost invisible, with large hæmorrhage occluding the disc of the left eye.

July 19th.—Evening: Had got up for an hour to have the bed made; was sitting by the window; had had some supper, and spoke of feeling better. Said that his eyes were better; could see the opposite houses and outline of passers-by with greater distinctness. Applied belladonna plaster to cardiac region.

At 1 A.M. on the 20th he was making a great noise as if choking; aroused him with difficulty, and administered some wine. He must then have had his first fit, the loud stertorous breathing of which had awoke and frightened his neighbour, and the similarity of noise, he at once recognised on the accession of the next. He was seen again at 3 A.M.; he was then awake, and felt better. At 4 A.M. he was found in a slight fit, arms and face slightly convulsed, followed by loud stertor. From this time he never regained consciousness for one moment. He had a series of slight convulsions—in which his trunk and legs did not take part—every hour until 7 A.M., when a much more severe kind of fit seized him. He then had thirty grains of chloral hydrate. The fits then ceased for nearly three hours, and he appeared in a heavy sleep, when a still stronger convulsion set in. Up to that hour they consisted in marked drawing of the face to the left side, and twisting of the head to the left also, followed by spasm, which began in nearly every case in the left hand and wrist, being rapidly pronated and supinated; then followed slight jerking. Afterwards, at intervals, the right side took on the same action, the legs being wholly free.

A marked change now took place in the action of the heart; for a minute or so prior to each fit it became irregular in its action and markedly tumultuous, jarring the parietes violently, and with this increased action the ramifications of the superficial vessels of the head and neck were very plainly mapped out like pulsating cords. To this succeeded a thrusting violently of both arms downwards, with hands flexed and dragged behind as if by their own weight; after which both arms together, or first one and then the other, were straightened out by the side of the body and rotated outwards, with hands rigid and palms turned outwards, then slowly raised and thrust upwards by the side of the head and neck, rubbing his chest violently at each passage, almost invariably striking under the chin, the skin covering which soon became red from the friction; frequent rolling of each arm alternately on the elbows, which were kept fixed, as if on a pivot; considerable resistance offered to the hand when held.

The fits in nearly every case took the same course, and went through the whole series of contortions above named. It was only later in the day that his legs participated in the action, and then after each fit loud stertor ensued for several minutes, followed by periods of tranquil breathing, which slowly merged into those actions above named. Consciousness was never regained, and the fits succeeded one another at last after a few minutes' (five to twenty) interval, until, about two hours before death, they merged into one simple general spasm, accompanied by deep lividity of face, breathing becoming more embarrassed by the accumulation of thick mucus. He sank at 6.47 P.M. (July 20th), having been insensible and convulsed for eighteen hours, during which he had upwards of thirty fits, their duration varying from 40 to 130 seconds. Prior to his death his temperature, which had been gradually rising, reached 106°, and towards death his pupils, which had been widely dilated with atropine, became much contracted, but returned to a dilated condition after death.

Post-mortem.—The heart was much hypertrophied; weight 17½ oz.; left ventricle at least one inch in thickness. The kidneys were very granular, and Dr. Green found great increase in the connective-tissue elements; the urinary tubes were blocked up by much fatty epithelium, and to this he ascribed the convulsions. The brain was paler than usual; consistence soft, and broke up readily under a slight stream of water; no exudation or tumours; convolutions flattened; no increase in ventricular fluid; no evidence of thrombosis or embolism.

Microscopical examination by Mr. Hogg.—Posterior segment of eye removed and placed at once in chromic acid. No traces of fatty degeneration, and the patches so palpable before death had disappeared. The granular layer had much increased, so that little else could be seen, excepting considerable quantities of a filamentous fungous growth; leucocytes abounded; it is not improbable that the patches can in some measure be ascribed to them. Choroid much paler than usual; much of the pigment was discharged; the stellate cells were greatly altered in form, and drawn out into irregular prolongations of a pale-yellow colour.

It may be added that, as the media retained their transparency to the end the retinal changes could be observed throughout the progress of the case: the vessels, particularly the arteries, became smaller after each fit, until, at the close, they were almost entirely lost and obliterated. Graefe relates a case of nephritic retinitis in which epi-

leptiform fits occurred (in an older patient); again and again he recovered from them, to be again attacked, until at last he became totally blind, and died worn out by the fits. It is believed by some that the loss of sight is due to excessive intoxication, whilst Schweigger looks upon the loss of sight as due to tension of the arterial system and increased circulatory troubles from the enlarged state of the globe.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 3RD, 1873.

DR. S. O. HABERSHON, F.R.C.P., PRESIDENT, IN THE CHAIR.

A LETTER was read by the President from Dr. Rayner, of Highbury, informing the Society that he would give £50 if before the next meeting nineteen other fellows would do the same, thus forming a fund of £1000. The thanks of the meeting were warmly accorded to Dr. Rayner for his kind and liberal offer.

Dr. SEMPLE showed a patient suffering from Aneurism of the Aorta, in whom there was some erosion of the ribs, allowing the tumour to be felt beating under the skin. The patient—a thin, sallow-looking woman, aged forty—had been ill since Christmas last, and had had daily hæmoptysis for a week. There was evident tumefaction of the left side of the chest above the nipple. The superficial thoracic veins, and the left external jugular, were swollen. On palpation there was a decidedly increased impulse over the cardiac region, and beyond it, superiorly and laterally, on the left side. The pulse was 108, weak, but regular. On the stethoscope being applied, it was lifted up with a heaving motion at each pulsation of the tumour, and there was a distinct blowing murmur heard over it, especially to the inner side of, and a little above, the left nipple. The apex of the heart beat as low as the lower margin of the seventh rib.

Dr. BERKART read a paper on

THE PATHOLOGY OF ASTHMA.

He said Laennec was inclined to think that asthma was due to a disturbance of innervation, and that the disease was not located in the lungs. Subsequently the spasmodic theory developed, chiefly because, from the absence of physical signs, or rather from their insignificance compared with the intensity of the symptoms, it was supposed that the lungs were healthy, and because experimental physiology apparently supported the nervous origin of the disease. Neither of these causes can stand the test of inquiry. With regard to bronchial stricture, it is only known that the bronchioles may contract, but nothing as to the how or the when. It had been shown that they cannot contract if the lung is over-distended, and as this condition, independently of the nutritive disturbance of the pulmonary tissue, constitutes the principal element of emphysema (in connexion with which asthma occurs most frequently), it cannot be due to spasmodic contraction of the bronchioles; moreover, in consequence of the catarrh which in the vast majority of instances accompanies or precedes asthma, the bronchial muscles are so thoroughly soaked with serum that they are completely paralysed and are unable to contract. The author maintained that asthma represented one link in a chain of affections which commenced with diseases of the bronchi and terminated with emphysema, asthma being the latent stage of development of emphysema. He defined asthma to be a symptom which accompanied all pulmonary affections in which congenital or acquired deficient elasticity of the lungs is the prominent feature, in consequence of which the diminished expiratory forces are, only after prolonged and increased effort, able to overcome an obstacle to the interchange of gases. The exciting causes of asthma are—(1) very tough and fibrinous mucus firmly adhering to the bronchial wall; (2) catarrh from the inhalation of foreign substances, especially ipecacuanha, pollen, and asthmaton ciliaris (of Salisbury); (3) displacement of pellets of mucus into a larger bronchus after forced expiratory efforts, such as laughing, &c.; (4) formation of crusts on the mucous membrane of the lung, a process analogous to the one observed on the tongue and on the nasal and pharyngeal mucous membranes; (5) interstitial œdema, as in gout and Bright's disease; (6) thrombosis and embolism of the smaller branches of the pulmonary and bronchial arteries.

Mr. HOOPER said that he had suffered severely from hay asthma this summer, and had tried various remedies, but had found nothing so good as a short residence at the sea-side.

Dr. THEODORE WILLIAMS said that the author had boldly attacked old theories, but had not proved a new one to be correct. In his own experience asthma often began without any catarrh, and often only affected certain people in certain districts. He saw this well exemplified when travelling abroad, for he noticed that some of the passengers in the train with him were seized in certain regions through which they passed with sharp attacks of asthma, and then as they left these places their breathing became natural. The theory broached would not account either for emotional asthma or the asthma produced by dyspepsia. Again, if the disease depended on the diminished elasticity of the lungs in general, it should exist in the suffocative catarrh of the dying, but it does not.

Dr. THOROWGOOD concurred with Dr. Theodore Williams. It had been shown that belladonna and stramonium diminish the contractility of the bronchial muscular fibres, and if the asthma depended on diminished elasticity he did not understand how these remedies effected the good they did. At the present time, abroad, it was thought that this muscular theory, as upheld by Dr. Williams, was an erroneous one; and some French writers on the subject had gone so far as to say that this theory was no longer held by any man in his senses.

In his reply Dr. BERKART maintained that there was no proof whatever that asthma consisted in a spasmodic stricture of the bronchioles; on the contrary, that all well-authenticated facts of physiology and pathology rendered it highly improbable, if not impossible, for such to be the case. He adhered to every statement made in his paper, the more so as every sentence of it could be proved to the satisfaction of everyone.

Dr. ROUTH showed a Renal Calculus. Mrs. S—— came under his care about twenty-five years ago, at which time she was suffering from piles, with considerable uterine irritation, for which she was treated and cured. About twenty years ago she went to Australia, where she had a paralytic stroke, with loss of power in one arm, and some difficulty in speaking. She recovered from this, and returned to England. About sixteen years back she became subject to agonising pain in the region of the kidneys; it came on in paroxysms of a most acute character. This lasted for six or seven hours at a time, and disappeared. During the attacks she was kept for hours under the influence of chloroform or morphia subcutaneously injected. While in this state nothing was very remarkable about the urine; once or twice an alkaline reaction was noticed, but nothing more; the water was clear, and without pus or blood; only a trace of albumen; specific gravity 1018. She was seen by Dr. Brown-Séquard at the time, who diagnosed it as a case of neuralgia of the kidney, and said that such cases were frequent at the Mauritius. These paroxysms continued for two or three years, and then disappeared. She became very obese, had incontinence of urine, and died at the age of sixty-three of effusion at the base of the brain. At the autopsy the brain was found to be softened, the left kidney was normal in size. There were two cysts on it, and embedded in its substance and close together were two stones the size of haricot beans. The right kidney was much larger than the left, and contained many cysts full of dark discoloured pus. In the calyx, towards the lower end, were two large, irregular-shaped stones close together, but not adherent. These were lodged in a sacculus, and weighed four drachms. Dr. Routh pointed out in this case that there was a remarkable absence of blood, pus, and albumen in the urine, and how the urgent symptoms had remained in abeyance so many years before death.

Mr. HALPIN showed a very curiously-shaped Renal Calculus. The patient, a girl aged fifteen, had suffered from incontinence from birth. About two months before her admission into the hospital she had been attacked with vomiting and diarrhœa, accompanied by great pain in the lumbar region, and death ensued in four weeks.

Mr. BRUDENELL CARTER said that the ophthalmoscope occasionally showed functional as well as organic kidney mischief. He was consulted by a lady for sudden dimness of vision occurring in one eye. On making an ophthalmoscopic examination, he found there was a general opalescence of the retina, and it appeared œdematous. From this he suspected renal derangement; and, on the water being examined, it was found to be slightly albuminous. When the patient travelled by railway an attack of hæmaturia was the consequence. She was put under proper treatment, and the albumen disappeared. The vision gradually became perfect, and at the last examination the retina was found to be in its natural condition.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 4TH, 1873.

SIR W. JENNER, BART., K.C.B., PRESIDENT, IN THE CHAIR.

DR. DOWSE exhibited a large Tumour of the Kidney, removed from a patient at the post-mortem examination. He had been quite well till two years ago, when he began to suffer from paroxysmal attacks of pain, vomiting, and diarrhœa. The urine was albuminous and bloody. He was emaciated, and had a cachectic look. The abdomen was distended, and the superficial veins enlarged. A tumour was detected in the left hypochondriac and left lumbar regions, reaching to the umbilicus. When in King's College Hospital some time previously he had left hemiplegia, and there was still defective motor power in the left arm and leg. At the autopsy the right temporo-sphenoidal lobe was softened, the liver cirrhosed, the right kidney and spleen healthy. The tumour was adherent to, and there were cancerous deposits in, the tissues around. It weighed 6 lb., and had the appearance of medullary cancer on section, there being large fibrous trabeculæ enclosing a pultaceous substance. Rindfleisch had described it as sarcomatous carcinoma. (The specimen was referred.)

Dr. HILTON FAGGE showed an Enlarged Spleen and Lymphatic Glands from a patient who had died in Guy's Hospital. A large, heavy woman, a cook, had been quite well till two years ago; then she began to lose flesh, and an abscess formed in the left groin, and burst. The leg was swollen, and the glands in the groin enlarged; then the glands in other parts, as in the neck, became swollen and suppurating. She became weaker, and died. At the post-mortem examination the glands throughout the whole body were enlarged and suppurating. The disease had commenced in the uterine appendages; a large abscess connected with the glands surrounded the left ovary, and the enlarged glands reached through the lumbar region up to the neck. The liver was enlarged. The spleen weighed twenty ounces, and in it were a number of large masses, the size of a walnut, containing a cheesy-looking substance. It was a very uncommon case, and exceedingly difficult to explain its nature. There was some evidence of syphilis, and it might be due to that. There was nothing like Hodgkin's disease. In reply to Dr. King, Dr. Fagge said there was no evidence of malarial disease.

Dr. GREENHOW showed a large Hydatid Cyst of the Liver which had perforated the diaphragm and right pleural sac. The patient was a woman aged thirty-six, who had been under his care in 1869 with a large hydatid cyst. This was tapped and 148 ounces of fluid drawn off. She remained well for a time, and appeared cured. In May, 1873, she again came under his care with a swelling in the side. She was tapped with a fine trocar several times. After one of these tappings she had a rigor, and a large trocar was passed into a prominent swelling and two ounces of pus drawn off, and the cavity was washed out. The patient sank and died. The right pleural sac was found almost obliterated by the cyst, and the tissue of the lung thickened. In the left lobe of the liver there was a large sac reaching to the sixth rib, capable of containing two pints.

Dr. WICKHAM LEGG related a case of Abscess of the Liver, perforating pericardium and pleura, from a gall-stone. A woman, aged twenty-three, five months before admission had had sharp pains in the right chest and vomiting, followed by jaundice, which lasted a fortnight; from that time she had never been well. At the autopsy a gall-stone was found blocking up the entrance of the common bile-duct into the duodenum. The bile-ducts were dilated, and most so in the left lobe. Around one of these an abscess had formed and burst on the upper surface of the liver. An abscess between the diaphragm and liver resulted, which had opened into the pericardium by two apertures, and into the right pleura by one. The left pleura was found full of fluid. During the last few months of her life there had been no jaundice, the stools were of a pale brown, yet the common bile-duct appeared closely plugged by the gall-stones; there was no great distension of the bile-ducts, and the gall-bladder was not distended.

Dr. CAYLEY thought that, as the bile-ducts were only dilated in one lobe, probably the ducts from the other side supplied bile to the fæces.

Mr. NUNN showed a Pistol-shot Fracture of Skull. The preparation had been brought him by Mr. Spurgin, one of the police surgeons. It showed the large size of wound of exit. A man had committed suicide by putting a pistol to his right ear. The base of the skull and jaw were smashed in; the ball was found lying against the inner table of bone on the opposite side of the skull; the inner opening of wound in the inner table was very small—only the size of the ball,—but the outer opening was very large, the bone being much splintered.

Dr. LIVEING exhibited Hearts showing moderator bands. Two of these were human hearts, and a third from the sheep, to compare with them. Dr. Rolleston, in his Harveian Oration, had called attention to its occasional presence in the human heart. Its use was to check undue dilatation of the ventricle.

The PRESIDENT said he had often noticed it, and it was often present on the right side.

Dr. GREEN showed a specimen of Fibroid Degeneration of the Heart. It was taken from a man aged fifty-two, a shoemaker, who was brought in dead into Charing-cross Hospital. He died suddenly. No history of previous condition could be obtained. At the post-mortem examination the most marked change was found in the heart. It was enlarged, especially on the right side, and weiged 20½ oz. The pericardium was healthy; the left ventricle was dilated, walls thickened; the endocardium was thick, opaque, and white; most marked towards the apex. On section it was dense and tough. The alteration was due to a growth of fibroid tissue between the muscular layers. This was most marked at the inner third of the muscular layer and towards the apex. The fibroid tissue was more abundant in spots. The right ventricle was dilated, walls thickened, but no fibroid change; the valves healthy; in other organs nothing marked. On examining the left ventricle microscopically, the change was seen to be due to a growth of fibroid tissue between the muscular layers. The fibres were atrophied and degenerated from the pressure of the fibroid tissue. The change was similar to that of cirrhosis of the liver. There were four classes of fibroid change met with in the heart. The first, secondary to inflammation of pericardium, the chronic pericarditis, and the outer muscular layers were affected; the second dependent upon endocarditis; the third resulting from chronic emphysema and dilatation of right side—here the right ventricle was affected; the fourth contained cases of syphilis, the fibroid change occurring in patches irregularly disposed.

Dr. HILTON FAGGE said he had lately met with the following case:—An old gentleman, aged seventy, came to town from the suburbs during the late foggy weather. He fell down insensible, and was brought into Guy's Hospital. He was very faint, the pulse 40, and temperature below normal. He died two hours after. The kidneys were granular, and there was a fibroid induration of the left ventricle more towards the apex and septum. No change in the endocardium. In another case he had seen, there was a change in the endocardium, but the fibroid change was in the middle third of the muscular layer. There was no history of syphilis. No small cellular growth could be detected. There was nothing but fibroid tissue, and he looked upon the change as of long standing.

Dr. GREENFIELD asked if the kidneys had been examined. He had met with a similar case. The fibroid change was in patches, and the columnæ carneæ were involved. There were vegetations on the aortic valves; the kidneys were large and tough; in the heart a small nuclear growth was found surrounding the muscular fibres; in the kidneys a

nuclear growth around the vessels. The urine was albuminous.

Dr. GREEN had examined the kidneys. The connective tissue was increased, and there was a small nuclear growth around the vessels; the vessels and the brain were diseased, fatty, and atheromatous. In reply to the President he said there was no opportunity of examining the urine, and he had not examined microscopically the vessels of other parts.

Mr. POTTS showed a specimen of Osseous Deposit in the Arachnoid. A lady, aged forty-four, had had delusions four or five years, and had been in an asylum. She had complained of pain in the head for some time. She died comatose. A thin lamina of bone was found pressing on the hemisphere along the longitudinal fissure.

Dr. RALFE exhibited a specimen of Aneurismal Dilatation of the Aorta. It was taken from a Chinaman, aged twenty-five. He had never had rheumatism or syphilis, and had always had good health. He died of dropsy. Each of the sinuses of Valsalva were dilated; the aortic valves were incompetent; the heart was enlarged, weighing 20 oz.

Mr. SMITH exhibited a specimen of Rupture of the Heart. An old woman, who had been run over, was brought in dead into the Middlesex Hospital. There were no marks of external violence; the second, third, fourth, and fifth ribs on the right side were fractured. The pericardium was full of black blood; at the apex was a small hole, and a probe could be passed into the right ventricle; the heart-substance was healthy; the spleen was ruptured, and a few ounces of blood were in the peritoneal cavity. In reply to Dr. Cayley he said the woman was stated by some of the bystanders to have spoken after the accident.

Reviews and Notices of Books.

De la Régénération des Organes et des Tissus en Physiologie et en Chirurgie. Par J. N. DEMARQUAY, Chirurgien de la Maison Municipale de Santé. 1 vol. 4to de viii.—328 pages, avec 4 planches. Paris: Baillière et Fils. 1873.

THE mode in which the regeneration of tissues takes place is a subject full of interest, and every inquiry which has for its object the method which Nature adopts to this end, and the means by which she may be assisted, is sure to be followed by improvement in our treatment of disease. No better instances of the truth of this could be adduced than the importance that is now universally attributed to the preservation of the periosteum in cases of resection, fractures, and injuries of bones, and to the modern method of healing ulcers by skin-grafting, both of which may be regarded as the outcome of numerous careful and well-considered experiments.

Notwithstanding the facts daily before their eyes, it is astonishing to find the older physicians, as Hippocrates and Galen, and even some of more recent date, as Louis and Richeraud, denying the possibility of the regeneration of any tissue, even of the bones. An enormous mass of evidence, both pathological and microscopical, has now been accumulated, showing not only that portions of the tissues of the higher animals can be regenerated, as in the case of broken bones and cartilage, but that entire organs, as the teeth, the spleen, and the crystalline lens, may after removal be completely re-formed. In the case of the lower animals the formative power is far greater, and the eye as a whole, or the limbs, may be entirely restored. It is interesting to observe that in the most remarkable of these cases there is either very little or no inflammation present. We may remark, in passing, that the historical references of the introductory part of Demarquay's work are much better worked up than in French books generally, and the introductory sections upon the repair of each tissue are complete in this point of view.

The regeneration of epithelium is now well known in connexion with Reverdin and Pollock's experiments, and there is little to be added to the facts in our possession, the results obtained by different observers being in complete harmony.

In regard to the regeneration of cartilage, however, considerable difference of opinion has existed, Kölliker with many others believing that they unite, when injured, either by bone or by connective tissue. Sir James Paget in one of his lectures states that cartilage is only repaired by cartilage in the young animal. M. Peyraud, however, who, is duly quoted by M. Demarquay, has shown that if the perichondrium is preserved the regeneration of cartilage will take place in the same manner as bone when the periostium is intact, and that the new material resembles fœtal cartilage. The regeneration of muscle, again, is a disputed point. Some recent inquiries, and especially those of Weber, Neumann, and Gussenbauer, seem favourable to the view that the fibres really regenerate, and that when sections have been made the re-establishment of the continuity is not effected by connective tissue alone. Demarquay has himself made some experiments on this point, especially in the case of subcutaneous section of the gastrocnemius of the rabbit, and traces very carefully the changes which occur, which he maintains lead always to the production of a fibrous cicatrix.

The regeneration of nerves has been largely studied of late years, and the acute observation of Waller, that after section of a mixed nerve, the proximal part of the motor and the peripheric part of the sensory fibres undergoes degeneration, has proved very suggestive as to the causes which lead, in certain cases, to non-union of divided nerves. The experiments of Philippeaux and Vulpian, and of Ranvier, do not permit a doubt to exist that nerves, in some favourable cases, can really be regenerated, though perhaps as a rule they do not reunite, when divided, with perfect recovery of function.

The latter part of M. Demarquay's work, which treats of the union and regeneration of bone and tendon, is that to which most interest attaches, since it contains the records of many experiments he has himself made. He reviews and discusses the opinions of Hunter and Jobert, who believed that the new tissue which reunites the ends of a divided tendon proceeds from the metamorphosis of the blood extravasated in the interval between them; of Robin, Paget, and Guérin, that it proceeds from a nucleated blastema thrown out from the vessels and divided tissue; and lastly of Henle and Lebert, which is to the effect that it results from the proliferation of pre-existent cellules. He then gives the result of his own observations, which are to the following effect:—Two days after the division of a tendon, such as that of the patella or the tendo Achillis, a soft gelatinous tissue infiltrated with serum occupies the space between the divided extremities and surrounds the clot of blood which has been extravasated. This tissue, examined under the microscope, exhibits vessels and elastic fibres, and obviously consists essentially of the swollen connective tissue. It contains, however, some spheroidal cells, which contain fat-granules, and on the following day have become much more numerous. The origin of these is doubtful, but it is not improbable that they are white corpuscles of the blood, the evidence that they are derived from the corpuscles of the connective tissue being less satisfactory. A certain quantity of mucine seems to be thrown out, giving a glairy character to the intermediate substance. The nuclei of the connective-tissue corpuscles increase in number in the ensuing days, become stellate, anastomose by means of their processes, and gradually form a kind of new connective tissue, which unites the extremities of the tendon, the clot undergoing in the meanwhile the usual changes that occur in extravasated blood.

M. Demarquay cites various instances to show the value of applying a suture in cases where the tendons have been divided. Some of these are taken from the old authors, but many are from his own practice. There is little to be remarked upon this part of the work except that he seems to have quite established the advisability of adopting this method. We have ourselves more than once employed it with success, and if another opportunity should occur, we should certainly use the carbolised gut ligature, and close the wound. The same reasons that are advanced for suture of the tendons are valid also for suture of the nerves.

The chief conditions influencing the regeneration of tissues are—1. That the general nutrition of the subject should be sound. Syphilis and scrofula appear to have little influence, *per se*, unless they have lasted long enough to lower the whole tone of the system and produce cachexia. In the earlier periods of their action they are much less prejudicial than albuminuria, diabetes, or the eruptive fevers. Reunion is seriously interfered with by erysipelas and traumatic fever, in which states suppuration readily occurs; by copious hæmorrhage; and it is occasionally interrupted by pregnancy. 2. That the subject should be young. In M. Ollier's experiments on the human subject, regeneration in cases of divided tissues occurred most readily and perfectly between the ages of thirteen and twenty. 3. The type of the animal has much to do with both cicatrisation and regeneration, processes that by no means run parallel to one another; for whilst in birds cicatrisation is very rapid, regeneration is often very difficult to obtain; in cold-blooded animals, like the triton, regeneration takes place with extraordinary facility, whilst cicatrisation is effected very imperfectly. 4. That the circulation should not be too rapid. Those tissues in which the circulation is slow, as tendons, epithelium, and nerves, afford the best examples of regeneration; whilst the muscular tissue, in which little or no regeneration takes place, is highly vascular. 5. The question of the influence of the nerves on regeneration is very fully entered into by M. Demarquay, and he thinks, though he speaks somewhat hesitatingly upon the point, that simple lesions of the nervous system do not exert a very marked influence on the acts of regeneration. The work terminates with a chapter on the influence of irritation and inflammation on the repair of injuries.

On the whole, this work constitutes a valuable addition to our knowledge, not only from the original facts it contains, but from the admirable manner in which the observations of others have been collected and compared. It is accompanied by four well-executed plates in chromo-lithography, containing eighteen figures, representing the changes following division of tendons, and there is a good bibliography.

St. George's Hospital Reports. Vol. VI. London: J. and A. Churchill. 1873.

THE last volume of these Reports is of more than average interest from the fact that some of its articles touch upon several of the important subjects of the day. The volume contains three Lettsomian lectures on Urethral Discharges by Mr. Henry Lee. In the first he shows that syphilitic persons are liable to a urethral discharge which is not gonorrhœal, and which may communicate syphilis to a "virgin subject." Of these syphilitic urethral discharges there are two kinds—the primary and the secondary. In the former the discharge is attended by circumscribed adhesive inflammation of the urethra, enlargement of the inguinal glands, and constitutional infection; the second variety being sometimes seen in syphilitic persons after sexual intercourse. Mr. Lee shows that the discharge in both instances is capable of conveying syphilis, and contends that this is the rational explanation of many of the supposed cases of syphilis supervening on gonorrhœa. He, moreover, asserts that it is highly probable that hereditary syphilis is more frequently transmitted by semen mixing with the products of syphilitic disease of the urethra than by a morbid condition of the seminal fluid itself. In the second and third lectures Mr. Lee completely crushes the spermatorrhœaists by showing that the semen does not enter the vesiculæ seminales at all, and that in so-called spermatorrhœa the discharge consists of the secretion of the vesiculæ. Further on he makes some suggestive remarks on the treatment of stricture of the urethra, which he says is sometimes due to a syphilitic deposit in the urethral mucous membrane, and which is remediable only by constitutional remedies.

Mr. S. W. Moore publishes the notes of a case of Osteomalacia, and some drawings of the microscopical appearances of the bone. Dr. R. J. Lee has some remarks, for which he is evidently greatly indebted to the writings of M. Hardy, on the most common form of Cutaneous Diseases of Children. Dr. Cordwent furnishes notes of a case on Sudden Death by the entrance of Air into the Uterine Veins. Dr. H. V. Carter gives some interesting details on Calculous Disease in India. Dr. R. J. Lee makes some remarks on Inhalation. Dr. Laking has a paper on Indican in Urine. Dr. Barclay supplies a suggestive and instructive paper on Quinine in Rheumatic Fever. Mr. Prescott Hewett continues his contributions to the Surgery of the Head in dealing with the subjects of Congenital Encephalocele and Hydrencephalocele. Mr. Pick writes on Cleft Palate and on the Partial Rupture of Arteries from External Violence. The Influence of Impaired Hearing on the Voice and Speech is tolerably fully considered by Mr. Dalby. Mr. Roberts treats of the Therapeutical Action of Sulphur. Mr. C. Walter reports a case of Femoral Aneurism in a man who died four days after ligature of the external iliac artery. Mr. Venning reports a rare case of Cancer of the Upper Lip. Mr. T. Holmes gives another case of Cancer of the Upper Lip following lupus, and in another article makes some very valuable remarks on a case of Aneurism of the Aorta treated by the simultaneous ligature of the right subclavian and carotid arteries. Dr. Whipham writes on Thrombosis in cases in which the arterial walls and the viscera are healthy; and Dr. Ogle has an excellent and classical paper on Certain Influences exercised by the Nervous System upon Bone. The Reports on the Obstetrical Practice are drawn up by Dr. Cavafy; on the Surgical Practice by Mr. Haward; on the Department for Ear Diseases by Mr. Dalby; and on the Maternity Department by Dr. Edgar Barnes.

But perhaps the most important article is one by Mr. Brudenell Carter on Contagious Ophthalmia, in which the author shows that there are three forms of the disease—first, that in which it commences as blepharitis or inflammation in the ciliary follicles; secondly, where it begins as simple catarrhal or purulent conjunctivitis; and, thirdly, a variety in which the disease commences with the formation of "follicular granulations." All these varieties are developed and fostered by bad hygienic conditions surrounding the patients, and are, if neglected, capable of being conveyed, by contact or through the medium of the atmosphere, from one person to another, and, if untreated, may lead to distortion of the eyelids and severe damage, or even actual destruction, of the eyeball. Numerous details of treatment are given with remarkable care and precision, and many prophylactic measures suggested. Mr. Carter specially warns against the evil effects of regarding cases as cured when only improved, as the disease will almost certainly be rekindled by any disturbing action. The article deserves the attention of all medical and lay authorities of large

schools, prisons, barracks, &c., and may be especially recommended for careful perusal by members of the Local Government Board. The point of Mr. Carter's remarks may be said to be the stress which he lays on the absolute necessity of establishing medical as well as lay inspection of schools and large public institutions, without which it is in vain to hope for a cessation of this hygienic scandal. Under existing regulations the inspection is conducted by non-professional persons, who, useless as they may appear, "at the worst commit no graver fault than to undertake to combine with their proper duties others for which they are unfit." It is, therefore, only by showing the Local Government Board that special work requires special knowledge that it is possible to secure an intelligent supervision and consequent protection against outbreaks of contagious ophthalmia in public institutions.

Report on the Cholera Epidemic of 1872 *in Northern India.* By J. M. CUNNINGHAM, M.D., Surgeon-Major, Bengal Medical Service, Sanitary Commissioner with the Government of India. Calcutta: Office of the Superintendent of Government Printing. 1873.

THE conclusions arrived at in this document involve matters of the very greatest importance. These conclusions are at variance with all the prevalent doctrines, and the author does not hesitate to combat every hypothesis that has been advanced from time to time in this and other countries regarding the nature, origin, and development of epidemic cholera. Dr. Cunningham is strongly opposed to "the water theory," as well as to the doctrines of importation and contagion of the disease; and of all the measures at present adopted to limit its progress he seems to regard that of quarantine as the most useless and prejudicial. We call attention to this report now simply with the view of indicating its tenor. The questions involved are truly of momentous interest. We do not wish to say anything by way of prejudicing the value of the statements and arguments adduced; but it is clear that the recorded observations and facts of a large body of educated men of all nations, with whose conclusions Dr. Cunningham is at variance, cannot be lightly set aside. That he contemplates nothing short of this, if his views of the disease be accepted, is clear from the following:—"It will, no doubt, be said, as it has been said before, if it should be proved that cholera is not spread by human intercourse, if man does not multiply the poison of cholera, if the evacuations do not contain that poison, and do not spread it through the water-supply, then we virtually go back to the same state of ignorance as we were in a hundred years ago. To this I would reply that if we are on the wrong road the sooner we go back the better, but the question will not be the consequence to any opinions. That is a small matter.....The only point of importance is—What is the truth?" We must defer a further notice of this document until the requisite leisure on our part enables us to examine, analyse, and consider the subject with the thoughtfulness and care that it requires.

ASHANTEE AFFAIRS.

THE last mail brought little or no news of interest from the Gold Coast. Kings are evidently as common in that locality as blackberries in this, and we suspect it has fallen to the lot of few generals to number so many kings among their audience as Sir Garnet did in his late "palavers" with his native allies. We have now reached a point at which, politically speaking, it would be more difficult to draw back than to go on; and the Government must be anxiously awaiting the receipt of the next military dispatches from the West Coast of Africa. By the latest accounts the detachment at Acrowful was in good health, notwithstanding that they had undergone much fatigue in marching; and the ground they occupied is said to be too damp for bivouacking in tents. The health of the garrison of Elmina was also said to be improving. It is surely time for the embarkation of the European force if the expedition is to be commenced at the beginning of the best season, and, considering how limited this season is, the military operations against the Ashantees will have to be pushed on with the utmost rapidity. We perceive that a party of Royal Engineers and a battery of artillery are to be added to the force originally named. It is no good speculating any further on the medical aspects of the undertaking. All we can do is to see that the best practicable safeguards have been provided. The results, whatever they may be, will soon begin to become apparent after the troops have landed. There are some difficulties of a military and engineering character, the solution of which we have never been quite able to reach, such as the extent to which the road-making and bush-clearing have advanced, the establishment of redoubts or military posts on the line of march, and the maintenance of a free communication between the front and the base of operations; but about these the General must be the best if not the only judge. One thing, however, can scarcely fail to present itself, and it is this—supposing the Ashantees defeated, and Coomassie taken, and the European force on the point of embarking for this country, it is quite possible that as soon as the Ashantees are sure of our departure they may come down like a flood on the wretched Fantees in our protectorate. If it be true that the King of Ashantee is bent on attacking Cape Coast Castle with a strong force, Captain Glover may seize that opportunity for outflanking him, penetrate to Coomassie, and then advance upon the Ashantee force in its rear.

All this, however, is conjecture; but there is no doubt about the preparations that are being made in this country. The *Victor Emanuel* has probably by this time left the dry dock, and the remainder of her fittings will be carried out in about a week. We understand it is not intended to move the vessel up to Woolwich, as stated in the papers.

THE "CRITERION."

THE handsome building which was privately opened under the above name on Saturday last will supply a long felt want in providing commodious and well-ventilated restaurant and dining rooms. It appears surprising that, in a town of the wealth and size of London, there should be so few attempts to combine the ornamental and the useful in the construction of public refreshment rooms. Messrs. Spiers and Pond's new house contains all the conveniences and embellishments necessary to comfortable and luxurious dining, a process that is now gradually soaring to the æsthetic. Of the general arrangements of the structure we can, from personal inspection, speak in high praise. The warming and ventilation are effected by forcing air through channels in which are placed hot-water coils, these channels communicating with flues in the wall, and the air so distributed to all parts of the house. The closet system leaves nothing to be desired. A striking feature in the "Criterion" is a highly ornate theatre, capable of accommodating 800 persons, and having separate ventilating arrangements.

VAGINISMUS CAUSED BY LEAD-POISONING.—In a number of the *Archives of Practical Medicine* Dr. Neftel relates several cases of vaginismus which he thinks were due to poisoning with lead. He had observed a few such cases in actresses or fashionable women accustomed to use cosmetics containing salts of lead. On instituting the usual mode of treatment employed in saturnine intoxication, the vaginismus disappeared without the use of any other means, and did not return when the patients renounced the use of this kind of cosmetics.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 15, 1873.

THE feeling and behaviour of medical men towards each other is a matter of great importance, whether with reference to their own happiness or the public reputation of the profession. The jealousies of medical men are sometimes spoken of as if they exceeded the jealousies noticed in other callings. Even if they did it would not be surprising, for all the conditions of medical practice are of such a nature as to call for great virtues in the practitioner. No man has to deal with human nature in its sensitive and peevish states so much as the medical man has. And that practitioner will alone exemplify medical etiquette who brings Christian and gentlemanly virtues to bear upon what he may consider the unreasonableness of patients or the selfishness of professional rivals. It is not surprising, therefore, if medical men sometimes fail to exhibit that high-toned bearing which befits the nature of their relations to patients and to each other. The system of medical ethics included in the laws and bye-laws of the principal Medical Corporations is rough and vague, and has been made still less efficient by the practical abeyance of the ethical functions of the Colleges. The same coarseness of ethical requirement characterises the Medical Act. A member of the profession must do something very gross before he lays himself open to censure by the General Medical Council or by the individual medical corporations. He must keep a sort of druggist's shop; he must divulge secrets of his College; he must offer medical aid to, or prescribe for, patients whom he knows to be under the care of other medical practitioners; he must publicly profess a secret remedy or method of cure; or put forth an indecent advertisement; or be guilty of a criminal offence;—he must do things of this sort before he can be said to break the bye-laws of the College to which he is attached. And moreover, he may do a great many of these things without the said College taking any notice of his misbehaviour. His conduct must be still more gross before the Medical Council will assume judicial or censorious functions. He must have been convicted of felony or misdemeanour, or be judged by the Medical Council to have been guilty of "infamous conduct in a professional respect" before it takes cognisance of his ethical character. Clearly, then, none of us have much to boast of in the mere fact that we have not come under the censure of our College or of the Medical Council. It will not be by judging ourselves in the light of their ethical codes that we shall find out the sins that more commonly offend our medical brethren, or that detract from the magnanimity and dignity with which all medical behaviour should be invested. We may break none of the bye-laws of our College, and yet we may be breaking the chief rules laid down by HIPPOCRATES. In other words, without publishing coarse advertisements and divulging College secrets, we may be given to self-praise, to the disparagement of medical rivals, to narrow judgments of the conduct of medical brethren, to jealousy, to unneighbourliness, to envy, to vulgarity; we may be guilty of want of patience or want of liberality; we may be moving among patients and brother medical men without sympathy and without generousness. These are the sins that no College code is refined enough to notice, and which it is not desirable that they should notice. In regard to these a man must be a law unto himself. They will not be understood in their subtleness by studying all the bye-laws of all the Colleges; but to detect them in his own nature a man will have to be severe upon himself. He must place himself in some great light, and let it "beat about" him—such as that of the Rules of HIPPOCRATES or of the divine morality of the Bible. It is only by doing so that the "offences which come" in medical practice, and about which we are appealed to every week, will cease. There is one other great preventive of all that is little and unprofessional—viz., the cultivation of the scientific spirit; looking upon practice not so much as a means of living, as a means of acquiring knowledge, of investigating truth, and of doing good. It is no insignificant fact that the Father of Medicine is the father of medical ethics, and that the best physicians have always afforded the greatest examples of those moral qualities which secure professional conduct.

There is much in the present circumstances of the profession which makes the cultivation of the ethical spirit at once more difficult and more obligatory. The old divisions of the profession are very much obliterated. The older hospitals, indeed, still exercise a sort of protection over old qualifications, and give them a local value other than their imperial one. But in the eye of the law all practitioners are alike. The general practitioner is no longer the mere apothecary acting under the orders of the physician; he is a considerably educated man with a corresponding feeling of independence. On the other hand, the public have larger notions of freedom, and, withal, there is a spirit abroad that would reduce the relation of patient and medical adviser to one of mere buyer and seller. But no new circumstances can supersede the old morality, and men will never cease to respect the virtues which constitute the professional spirit, whether it be manifested in club practice or by Court physicians.

IN an article on "A New Field for Hospital Practice" which appeared in these columns three weeks ago, it was suggested that there should be in connexion with the large metropolitan general hospitals, and especially those to which medical schools are attached, a system of out-door medical relief similar to that which exists at the dispensaries, whereby a particular class of patients should be able to receive charitable medical aid at their own homes. Though its application may be attended with some difficulties, the scheme is practicable, and may be made of great value to students and patients, without clashing in any way with interests of private or parochial practitioners.

It cannot be denied that while the student of the present day has gained considerably by the discontinuance of the old system of apprenticeship, and has been saved from many of its demoralising influences, yet he has to some extent forfeited a practical acquaintance with some of the peculiarities of general practice. Studying, as he does,

only the diseases which are to be met with in hospitals under conditions altogether different from those in which he will subsequently have to treat them, the student will find when engaged in general practice, be his patients rich or poor, that there are certain technicalities other than merely diagnosing and treating disease, and that a knowledge of human nature and human passions is as essential to success as an accurate acquaintance with the pathology of disease, or with therapeusis. By a plan such as we have hinted at, the strictly professional education imparted at the medical school would be complemented by practical instruction in the details of the routine of private practice. Not only so, but facilities would be afforded for studying many ailments which, for various reasons, are not treated at general hospitals. For instance, measles, scarlet fever, whooping-cough, and many other diseases of childhood which are, from their nature or other circumstances, unfitted for the wards of a hospital and not proper subjects to attend as out-patients, as well as many chronic illnesses and the diseases of old people, may all be treated at a comparatively small cost by a system of out-door medical relief. By this means, therefore, the student would not only be enabled to acquire a knowledge of certain maladies not usually seen at the medical schools, but would be materially benefited by the opportunities afforded of seeing patients at their own homes, whereby he would in every way be rendered eventually more competent to engage in the practice of his profession.

The desirability of such a scheme may be looked at from another point of view. There is a deserving class of persons between the pauper whose medical treatment falls to the care of the parochial practitioner and those who are able to pay small fees to the medical man who practises in the poorer districts. This class includes a large number of persons whose constant exertions yield barely sufficient for the maintenance of themselves and the families dependent upon them, and who are therefore utterly unable to make provision for poverty or sickness. To such as these it is sufficiently calamitous to be struck down with disease without being encumbered with the expenses of medical attendance, which in the majority of cases they are unable to discharge. It may also happen that a poor woman, the mother of a family, for instance, may be afflicted with disease, and too ill to attend a hospital as an out-patient in cold and severe weather, but she may be strong enough to keep together a home which depends on her presence.

It is, however, in speaking of the administration of the out-door relief that we feel the greatest diffidence. The working arrangements will depend so greatly on the district in which a particular hospital is situated, and on the number of students available for out-door work, that it is almost impossible to devise a plan that will work satisfactorily in every instance. Speaking generally, it may be said that the *personnel* should resemble that of the large district dispensaries, which, in addition to a consulting staff, have other officers to do the routine work. The consultees in the case of the hospitals should be the junior staff who have charge of out-patients, who should instruct someone to visit at their homes those out-patients who cannot be admitted, but who are too ill to attend the hospital regularly. Besides this, however, a certain hour should be fixed at which to receive the applications for aid, every deserving case being at once attended to by qualified gentlemen, who should reside in the hospital. Certainly all first visits should be made by these gentlemen, who should be held responsible for all the cases. The junior students should only attend cases under the supervision of their seniors, and should be called upon to report on the progress of the patients from time to time. A discretionary power should moreover be given to the seniors to refuse aid to all undeserving persons, so that none who are able to pay for medical advice might impose upon the charity by becoming the recipients of gratuitous aid.

Against the adoption of such an administration it may be urged that already the poor are sufficiently well provided with charitable medical relief, and that an extension of it would be detrimental to the interests of the private practitioner. With this we cannot agree, for, properly conducted, it would be a most discriminating means of charity. By seeing the patients at their homes greater facilities will arise for judging of the condition of the patient than could possibly be obtained at the hospital. It is, indeed, more probable that the practitioner will be benefited, by being relieved of much unremunerative labour thrown upon him by the present scantiness of out-door charitable medical aid. The persons assisted from the hospitals would be just those persons who cannot pay for advice, and who, if unable to enter a hospital, must either call in the parish doctor, or run up bills with a private practitioner which they will never be in a position to discharge.

DR. LYONS, of Dublin, has spoken out boldly in favour of a Catholic University, in giving the opening address in the Medical Faculty. He did not go much into medical questions, or show us in what way Catholic students are to be taught medical truth differently from Protestant students. This is disappointing in the Dean of the Medical Faculty, who doubtless could have said something in defence of his strong opinions as to the claims of Catholics to separate and distinct university education in medicine. The Roman Catholic hierarchy are anxious to have complete control over not only the elementary education of Ireland, but over the higher education of the Catholic youth, by which they are taught the sciences and trained for the learned professions; and they propose, pending the passing of what they would consider a just University Bill, to have a complete university of their own, and, we presume, to grant degrees in medicine as in other faculties. The Pope is an old source of degrees, and we still retain the relics of the notion of the ecclesiastical source of degrees. With us, however, the system is nearly effete. The Act of 1858 provided for the registration of degrees granted by the Archbishop of Canterbury prior to the passing of the Act. But just as we are growing out of the notion of taking our degrees from the Church, some of our Catholic friends seem to be getting more and more in love with it. We say *some* of our Catholic friends, for there seems considerable doubt as to whether any great number of Catholics agree with Dr. LYONS, or are seriously dissatisfied with the existing provisions for giving either medical education and

qualifications or a university education. The Catholic School of Medicine has been in existence for many years, and its lectures are duly recognised by all the boards. Nevertheless, not one-half of the Catholic students seem to get their education in the Catholic school. They seem to have the common sense of other students, and go to what they think the best medical schools. Comparatively few Irish medical men give the Cecilia School as the place of their education in the Medical Directory. At the Queen's University, again, there is a large number of Catholic students. Thus, in the session 1871–72 there were in the Queen's University—of Irish Church students, 243; of Roman Catholics, 200; of Presbyterians, 234; of other denominations, 68. Dr. LYONS very imperfectly—we will not say unfairly—represented the work done by the Queen's University in saying, as he did, that it had made only 795 graduates, at a cost of four-fifths of a million. He leaves out of the calculation 635 degrees in Medicine, 250 degrees in Surgery, 129 degrees in Engineering, and 47 degrees in Law, which it has also conferred. And we have reason to believe that the examinations—at least in the case of medical degrees in the Queen's University—are very good ones. It is evident that lay Catholics are not hindered in the use of the best schools and universities to the extent which some would have us believe. The great length, indeed, to which they go, like other sensible people, in using the means of education within their reach, is probably the chief reason for the hierarchy wishing to have all education under their control. The great concessions made to Catholics in Mr. FAWCETT'S Act, opening fellowships and even professorial chairs to Catholics, are not likely to diminish the respect of lay Catholics for the existing universities in Ireland. When, further, it is considered that any medical degree conferred by the Catholic University would be entirely without legal value, and that the use of any title assumed on the strength of it would amount to a violation of the Medical Act, it is gravely to be doubted whether any considerable number of Catholics would take degrees, should they be offered, from the Catholic University. Such degrees could only be legalised by an Act of Parliament, and we need not say that Parliament would never sanction the gift of medical qualifications by a body entirely irresponsible to it or to the General Medical Council, even if the body be associated with the Jesuits, which Dr. LYONS puts forth as one of the distinctive advantages of the Catholic University.

THE Minister for War has addressed a communication to the Chairman of the Parliamentary Bills Committee of the British Medical Association, in connexion with the recent supplementary Warrant for the Army Medical Department, which merits some consideration at our hands. We are extremely glad to notice one thing. It will be seen that Mr. CARDWELL takes care to state that the responsible head of the Medical Service had previously brought to his notice the different matters out of which so much dissatisfaction has arisen. It would be strange, indeed, had it been otherwise; but Government officials are surrounded by an atmosphere of official reticence which must occasionally prove somewhat oppressive. Whatever may be the criticisms to which they are subjected, they are compelled to maintain a strict silence. As no one possesses a better knowledge of what is reasonable and just to a department, so no one more frequently receives discredit and even opprobrium than does the head of it for measures over which he has little or no control. Many conscientious and honourable-minded men have felt their official position wellnigh intolerable, and their retirement from the direction of a branch of the public service has often been accompanied by a sense of bitter disappointment as they have cast up the sum total of frustrated designs and unrecognised, because unknown, labours. The character of such men is frequently sacrificed to a low-toned political expediency. It is certain that official heads too often fail to obtain concessions for their subordinates, unless strongly backed by public opinion; but it is surely right that these subordinates should be led, first of all, to seek redress for their grievances, fancied or real, through legitimate channels, unless we desire to foster a spirit which is subversive of discipline and calculated to dissipate the respect that subordinates should feel towards their own immediate heads. We have said more than we had intended, but it seems to us to involve this principle—viz., that our public men should bring their official conduct to the same test as their private conduct, and not, as at present, consent to act in one capacity in a manner that they would scorn to do in the other.

Mr. CARDWELL, when speaking of the advantages that have been conferred upon the Army Medical Service by the general scope of the arrangements, must surely be aware of the fact that these advantages are mainly on the side of the State in the economy and increased efficiency of the service. We have already expressed our opinion in regard to forage—viz., that the class of officers having the strongest claim to it have been left out. We are curious to know whether the tenure during which the surgeon as well as the surgeon-major is to be attached to a regiment is five years; for in that case it is quite possible that a surgeon, ranking relatively as captain, may find himself at the bottom of the list of men of his rank. The concluding paragraph, by which Mr. CARDWELL proposes to modify the arbitrary severance of the connexion between medical officers and the regiments to which they are at present attached, evinces a considerate and just spirit. In the preceding remarks we are not animated by a captious feeling; on the contrary, we are desirous of seeing that a just balance is struck between the claims of the Medical Service and the public, and that an end is put to every legitimate source of discontent.

IN summarising, as we proposed to do several weeks ago, the official and other means used to prevent the introduction and dissemination of cholera into this country, there is really but little to record. It is well known to most of our readers that, in the autumn of 1871, an Order in Council, which gave very extensive powers to the Commissioners of Customs and local authorities as regards ships arriving from foreign ports, was issued. This Order was supplemented by a valuable Memorandum issued from the Medical Department of the Privy Council office, bearing date August 10th, 1871. In June of last year our knowledge of the recent diffusion of cholera in Europe was quickened and extended by the publication from Mr.

SIMON'S office of an exhaustive report on the subject by Mr. NETTEN RADCLIFFE; and in July of the same year a circular letter was issued from the Medical Department of the Local Government Board calling attention to the Order in Council of the previous year, and urging the sanitary authorities of ports to provide without delay necessary hospital accommodation, special attention being directed to the desirability of establishing floating hospitals. This year, as we all know, has witnessed the inauguration of Port Sanitary Authorities under the Public Health Act, and the issue of a revised Order in Council specially addressed to Customs and Port Sanitary Authorities. The latter, and indeed the former also, have interpreted the Order in various ways, and of course with various degrees of success, some drawing the line too tight, and others holding it so loosely as to make the Order a dead letter. Port Sanitary Authorities are still in their infancy; but enough has been done to enable those interested in the matter to see that a proper interpretation of the Order by the officers in charge of its working, and a proper degree of vigilance exercised by medical officers over vessels after their arrival in port, ought to add to our safety in a very considerable degree. We believe that the Medical Department of the Local Government Board will, before the summer of next year, issue such directions to the Port Sanitary Authorities as to the reading of the Orders and Acts in question as will tend to simplify work and render it effectual.

WE have to add another name to the long roll of medical men who have been struck suddenly and fatally down by contagious disease caught in the performance of their duties. Our "Obituary" to-day records the death, a week ago, from scarlet fever, of Dr. GWYNNE HARRIES, one of the medical inspectors of the Local Government Board. The story is pathetically brief. He had been working amidst the disease in the north. In the early morning of Thursday week he returned to town, ailing he knew not from what. On the Saturday following, shortly after noon, he died.

Dr. HARRIES has been cut off in the maturity of his powers, and a life full of promise has been brought to an abrupt close. By his death the public have lost an accomplished and able servant; but he died as he would most have cared to die—in his work. Mr. SIMON'S testimony to the excellence of his qualities, and to the affectionate esteem in which he was held by himself and the officers of his department, will meet with a sympathetic response from the profession at large.

Does death come too soon when it comes so honourable and so honoured? It is hard to answer this question with the fresh memory of the vacant place in Dr. HARRIES' home, and especially of one aching heart there.

WE hear that a large number of medical officers—about forty in all—have been placed under orders, or are already on their way to the Gold Coast, in connexion with the forthcoming campaign. About one hundred men of the Army Hospital Corps will also take part in the expedition, and be distributed among the hospitals at the base of operations and in the field, and on board the floating hospitals and various steamers that may be utilised in conveying the sick homeward.

Medical Annotations.

"Ne quid nimis."

INCOME OF THE COLLEGE OF SURGEONS.

AT a time when the future financial position of our great medical corporations is likely to be considerably affected by the formation of a Conjoint Examining Board, it may be well to draw attention to the annual statement of accounts published in the Calendar of the College of Surgeons. Taken as a whole, the income of last year slightly exceeded that of its predecessor, but then the expenses also were larger, the totals being (omitting shillings and pence) an income of £13,311, and an expenditure of £12,276. This total includes both the income and outgoing of the various trust funds. With respect to one of these, the Hunterian, we may remark that the annual income is £49, whilst the "Oration" (Hunterian?) is put down as costing £120. The orator's fee is, however, only ten guineas, and the rest of the money was spent on a dinner. Fortunately, the oration and dinner being now only biennial, there were two years' dividends available, and thus the College had only some £20 to pay out of its own funds—a fact which ought to be more clearly stated.

By the Preliminary Examination in Classics, &c., the College made a profit of £535, having received from the candidates £867, and expended on the examination £332, and it must be allowed that the College of Preceptors certainly does its work very cheaply. By the professional examinations of all kinds the profit to the College was £5978, the receipts being £9856, and the expenditure £4735. The College department, including the salaries of the secretarial department, cost £2444, the Museum £2121, and the Library £655, during the past year.

But the important consideration is, how will the funds of the College of Surgeons be affected by the new mode of examination proposed by the Conjoint Board of the Colleges of Physicians and Surgeons and the English universities? It is shown above that the College museum and library together cost £5220 last year, while the permanent income of the College amounted to only £2061. To this may now be added about £500 per annum—a reversion understood to have fallen to the College by the death of a child of Mr. Cline's,—raising the permanent income to some £2500, in order to meet a permanent expenditure of double the amount.

By the scheme agreed upon for the Conjoint Examination it was arranged that half the money paid by the candidates should be devoted to defraying the expenses of the examinations, and that the other half should be divided in the proportion of one-third to the College of Physicians and two-thirds to the College of Surgeons. The number of diplomas issued last year by the College of Surgeons was 383, but would probably be a little higher under the new scheme; and we may assume 400 as the average number, which, at £30 per candidate, would give an income of £12,000. To this should be added the fees received from those who pass the first examination but never present themselves for the diploma—say £750 per annum. One moiety of this entire sum would be £6375, and of this two-thirds, or £4150, would go to the College of Surgeons; making, with the permanent annual income of that institution of £2500, a total sum of £6650. To this may be added some incidental receipts, such as the fees paid for the admission of elected fellows, the profit on the examination of fellows, the pensions falling in, and the profit on the examinations in midwifery and dentistry. Probably also a considerable reduction could be made in the expenses of

the museum, and in the size of the College staff when the examinations are conducted by examiners appointed by the Committee of Reference; and this may be estimated at some £350 per annum.

Thus it will be seen that there is, after all, no immediate prospect of the College of Surgeons "going to the dogs," as has been anticipated by some of the older members of the College Council.

HOSPITAL MEDICAL SOCIETIES.

THERE is now scarcely a metropolitan medical school without its pupils' debating society. The important part which the meetings of these may play in the education of our students is sufficiently recognised to very frequently induce members of hospital staffs to accord them their support, not only by subscribing, but by holding office, attending, and contributing. We frequently find those prominent by their regular attendance when students subsequently show themselves in the front rank of the profession. It would almost seem that the value to the student of the opportunities offered by these meetings is too obvious to need pointing out; but that such is not the case is often shown by the flagging support which they receive from those more especially calculated to profit by them. We feel that these meetings tend to develop the mind, supplement the knowledge, add to the confidence of the student of medicine, and thus render him better fitted to grace an honourable profession, and to fill with credit that position in society which the properly educated medical man merits and should claim. Therefore we earnestly counsel our future medical practitioners to avail themselves most fully of the opportunities we have indicated, for the result can never make them regret the one or two evenings a fortnight spent in doing so.

Those who follow our counsel will profit by each important case occurring in the hospital almost as much as if it were under the care of the particular officer to whom they may be attached for clinical work; in diagnosing they will be stimulated to observe with accuracy, to conjecture with caution, to discriminate with judgment, and to decide only after deliberation. Great as these results appear, they are not all, for amongst others too numerous for us to touch upon, the acquirement of a fluency and elegance of speech takes a prominent place, a power that will always assist the ambitious man, and without which the best of men will often have to forego positions they would otherwise be justly entitled to hold. Nothing tends to break down the too constant distinction between men of different years more than these meetings; and this is done to the mutual benefit of all, for besides the juniors profiting by their predecessors' experience in carrying out the curriculum of studies, in future years each one feels less than he otherwise would that he is an isolated unit in one of the greatest professions. And though by no means anxious to advocate a species of trade unionism among medical students, we greet with satisfaction aught that is calculated to produce in them a unity of action; for we believe that by co-operation they may do much to secure improved clinical teaching, to raise the standard of their education, to perfect the routine at their schools, and last, but not least, to increase their own self-respect.

It would be absurd to expect each, or indeed the majority, of the papers read by members of these societies to contain anything original or novel; but to argue, therefore, that these papers could not be useful both to their readers and hearers would be more absurd. We believe that the preparation of papers develops a habit of thoroughness, and that their discussion promotes a love of truth-seeking criticism, which will save many a grievous blunder in medical practice; moreover, the display of temper which an animated discussion gives rise to, whilst teaching the importance of controlling one's passion, affords an excellent field for the study of character and the exercise of forbearance. Case nights are not one of the least important features of these societies, and we believe that their usefulness might be increased by the students of one hospital visiting the meetings of the society at another, thereby encouraging a friendly intercourse between the schools, and establishing an intimacy which would afford the industrious man the opportunity of seeing most of the important cases which occur in the metropolitan hospitals during his studentship, besides setting up a wholesome rivalry.

THE ABUSE OF PHYSICAL EXERCISE: "A DEATH-CHASE."

WE cannot recall to our recollection a sadder case than that of the little Rossall scholar, whose death was plainly attributable to physical overwork in one of those athletic games now so popular, unfortunately, in school and university life; and the question which at once occurs is, whether it be not our duty, on medical grounds no less than on those of humanity, to protest against a system by which parents have their children hardened at the cost of having a percentage of them killed in the process? Rossall is, we believe, a large and excellent school; its head-master has the character, and no doubt most deservedly, of being an amiable, accomplished, and popular man. However much we may sympathise with the school authorities in the sorrow which they must feel, we cannot avoid stigmatising the system, or rather lack of it, at this and other public schools as cruel and deserving of severe reprobation.

The facts are simple and sad enough. A young and delicate but healthy boy, on a wet, cold, November day, divested of all clothing except the lightest, starts on a chase which would tax the powers of the most robust; he is urged on by that fiercest of stimuli, school opinion, to run at high speed; fairly broken down and exhausted, wet and shivering, he drags himself homeward, and lies down and *dies* within reach of shelter of the school—perishes of cold and exhaustion in the playground, within sight of the fire-light, and within hearing, it may be, of the merry voices of his schoolfellows. It strikes us as astonishing that a roll-call on the return of the boys was not made, which would have disclosed his absence, and that no search was instituted immediately he was missed; his discovery then might probably have saved his life. As to the inquest that has been held, we may dismiss it by saying that nothing seems to have resulted from the imperfect and perfunctory character of the coroner's inquiry beyond the stereotyped and very unsatisfactory verdict of "Accidental death."

The death, in our opinion, was clearly attributable to preventable causes; and it is in order that the lessons to be derived from such a melancholy occurrence may not be circumscribed within the limits of the school itself, but be laid to heart by the authorities of every large school, that we dwell upon them. Accidental or not, the disastrous effects of a vicious and defective system pursued in many public schools cry aloud for attention. We are training our youth mentally in grooves that give a "veneering" of education for competitive examinations, leaving them to seek in self-culture the qualities necessary to fit them to take part in the battle of life with any chance of distinction and success; and, physically, we are too often adapting them all alike, regardless of differences in strength and capabilities, to exercises which cannot be undertaken without risk to life and health in the case of young, delicate, and immature lads. It should be the business of someone to see that boys do not engage in exercises for which they are unfit; some-

thing should be done to put a stop to the stupid and dangerous practice of allowing boys to adopt the light racing costume commonly worn on these occasions, regardless of wet and inclement weather, and the ponds and ditches they may encounter in their chase. A certain number of bigger boys should be made responsible for the attention of the smaller ones to some simple details. And, lastly, there should be an inflexible system of roll-call instituted at sufficiently short intervals in every large school to guard against boys getting exhausted by long abstention from food, and to detect the abstentees with facility and rapidity. We do not advocate coddling, and we do not forget the frankness, the self-reliance, and promptitude which are the products of a public school life; but it is too much to expect parents to purchase these qualities at the expense of their boys' lungs and hearts, and at the risk of rheumatic fevers, and, it may be, as in the present instance, of death from cold and exhaustion.

THE "CITRATE OF MAGNESIA" QUESTION.

WE decidedly think that the prosecution which has been the immediate cause of the present excitement about "citrate of magnesia" bore hardly upon the druggist who was the unlucky subject of it, and that the fine inflicted upon him was essentially unjust. Mr. McDermott, the tradesman in question, evidently intended no fraud; and if (as we certainly think) it be desirable to put a stop to the practice of selling an article by a name which incorrectly describes its composition, his was eminently a case for magisterial warning and the infliction of a merely nominal fine. It has been perfectly well known, any time the last fifteen years, that the so-called citrate of magnesia does not necessarily contain any magnesia at all; in fact, the article which was originally called by that name was merely a citro-tartrate of soda, or rather, to speak correctly, a mechanical mixture of bicarbonate of soda with citric acid and tartaric acid, which only became a real citro-tartrate on mixture with water. So notorious was this, that the British Pharmacopœia of 1867 contained a "Citro-tartrate of soda," with the express comment that its popular name was "Granular effervescent magnesia"; and in Squire's "Companion" a note was appended—"*vulgo*, Granular effervescent citrate of magnesia." Consequently when Mr. McDermott sold a (potential) citro-tartrate of soda under this name he merely did what thousands of druggists have been doing without the slightest idea of concealment. The misnamed article became a popular, and indeed a very useful, summer drink and mild febrifuge.

There can be no question, however, that the original inventor who labeled this preparation with the false name was guilty of a very serious fault, and that the practice of suggesting that articles, more especially drugs, contain substances which they do not contain ought to be discouraged and repressed in every way. The more respectable chemists, and especially the authorities of the Pharmaceutical Society, have repeatedly discussed the matter, for many years past, with a view of obtaining the discontinuance of the incorrect name; and the magistrate's decision in Mr. McDermott's case has evoked a strong expression of opinion. Interesting letters on the subject will be found in our contemporary, the *Pharmaceutical Journal* of last week, more especially one from the President of the Society, Mr. T. H. Hills, who worthily represents the old firm of J. Bell and Co. It appears that this firm, and several others, have for a long time sold the Pharmacopœial citro-tartrate of soda, with or without the addition of magnesia, but with a label distinctly stating the real nature of its composition, and intimating that it was intended to replace the incorrectly named popular preparation. There can be no doubt that it is the duty of all druggists to follow this example; and in the meantime we hope that Mr. McDermott's fine will be remitted by the decision of a superior legal authority.

SESSIONAL EXAMINATIONS.

THE Royal College of Surgeons in Ireland has been the first of the licensing bodies to introduce the practice of holding sessional examinations, by which the knowledge of the student may be tested and his progress estimated at various periods in his studies. A recently promulgated regulation enacts that all students commencing their professional studies after October 1st, 1871, shall pass three examinations—the first examination at the termination of the second winter session of medical study; the second examination at the termination of the third winter; and the final, or pass examination, at the end of the third summer. The examinations will include answers to written and *viva voce* questions, and will embrace the subjects of study during the preceding year. The examinations will be held three times yearly—in April, July, and December; and we presume that a candidate may present himself when he chooses, though he must of course pass the three examinations in their prescribed order.

This introduction of sessional examinations was one of the points much insisted upon in the educational scheme drawn up by the Medical Teachers' Association under the auspices of Mr. Simon. The Irish College, though deserving all credit for its innovation, has not, however, carried its regulations to the desired extent of making failure to pass a given examination arrest the progress of the student's studies until the difficulty has been overcome. At present a student who fails in his first examination goes on with his surgical lectures and hospital practice as regularly as his more successful companion, though his attention is, or ought to be, concentrated upon his anatomical studies; and they both perhaps receive their diplomas at the same time. Such a regulation also would probably put a check upon those gentlemen who are content to "loaf on" into their fourth or even fifth year without passing any one of their required examinations, with the most disastrous results to themselves and the pockets of their friends.

HEALTH OF NAPLES.

ITCH and Calvinism, according to Sydney Smith, are often found together. Dirt and Catholicism are still more frequent companions. The Latin countries, it is notorious, are in their sanitary arrangements the most backward in Europe, and disease is a periodical Nemesis. Naples is at present panic-stricken by cholera. Cases are frequent, and recoveries comparatively few. A temporary abatement of its severity has been followed by a fresh outburst in the prisons, the interiors of which are still far from "models," and the surroundings so foul and noisome as almost to double the penalty of incarceration. *Pozzi neri* (cesspools), never cleaned out within the memory of the oldest inhabitant (whose age in the circumstances is a greater miracle than any associated with San Gennaro), abound on the very sites of these buildings, and with the inevitable results. So numerous have been their cholera cases that the still healthy among their inmates have been distributed in other prisons, to the great terror of the invaded localities. Castellamare, the resort of the tourist, has received a heavy contingent of these possibly infectious malefactors, and the inhabitants are loud in their complaints at the doubly unwelcome arrival. With tardy yet precipitate energy, the municipality are flushing the drains, pouring into them in one quarter of the city as many as a hundred butts of sul-

phate of iron. These and similar measures have not yet, however, restored confidence to the impressionable Neapolitans; and it is proposed to suspend the examinations of the university students, which usually begin on the 1st of November. The publication of the daily bulletin, as tending to keep up and diffuse the panic, is also recommended to be discontinued. This ostrich-like policy will, we hope, be abandoned. Cholera is a kind of sanitary Masaniello, but for whom the measures now enforced and the increased attention to household and personal cleanliness now observed would be relaxed and the improvement of Naples postponed till the Greek calends. The revelations of the sanitary commissioners are daily more revolting. Signs of the worship of Cloacina are as common below the streets as the catacombs of the early Christians in subterranean Rome. These must be removed once for all; water-tight and well-trapped drains must replace them; and the water-supply of the city must be made pure and abundant. Naples is as badly off in this latter respect as in the others, and though her municipality is working with spasmodic energy, she will never be a safe resort for the tourist, much less for the invalid, until an educated public opinion is substituted for the prevailing superstition, and the truth of cleanliness being next to godliness realised in the daily walk and conversation of her lively but lazy and (scientifically considered) benighted inhabitants.

AN ANGLO-FRENCH WAR.

THE *casus belli* has nothing to do with politics, the contention arising from the pathology of cholera. Dr. Henry Blanc, an Indian medical officer, has for some time past been publishing in *L'Union Médicale* of Paris a series of papers wherein he promises to cure cholera with chloralum. Dr. Blanc states, among other matters, that the propagation of the disease takes place through the infiltration of springs by cholera dejections. Thereupon an angry letter appears from M. Charles Pellariu, saying that he had pointed out that cause in 1849, and complaining of the British author, who is allowed to write at great length in a Paris medical paper, and forgets to give the palm to whom it is due. Of course, there comes the rejoinder, in terms more acid than dulcet, pointing out that the discovery belongs to the late Dr. Snow. We all remember the Broad-street pump, and the fearful mortality which, on a given day, visited the locality. That Dr. Snow's misgivings were duly appreciated is apparent by the disappearance of the pump. Dr. Blanc was allowed to make trials with chloralum in the Hôpital Beaujon, and considers that he has had some success in that institution; but the house-physician to the hospital hastens to send *L'Union Médicale* a letter wherein he states that this success is illusory.

SANITATION AND COMMON-SENSE AT RICHMOND.

IT would appear that what might be popularly, though not, perhaps, very elegantly called the "Richmond riparian row," is about to reach its grand climacteric. The public have for the last eighteen months been considerably amused and edified by the constant official conflicts between the riparian inhabitants of Richmond and the Thames Conservators, the latter of whom have, as all Londoners know, absolute control (except in sanitary matters) over the River Thames from Oxford to Southend. The war has lately waged fast and furious, for the inhabitants of Richmond clamour for a weir as the only means of restoring their once beautiful stream to its pristine state, and this the Conservators decline to give them, because, according to the opinions of various eminent engineers, the erection of the weir would damage very seriously the commercial interests of the Port of London. A dredging scheme has been proposed, and was, as we believe, sanctioned by the Conservators, under the advice of Mr. Stephen Leach, their engineer. The Richmond authorities, however, not content with dredging, determined to appeal to the Board of Trade, who are supposed to be able to ride roughshod over the Conservancy to any extent. This appeal was made on Tuesday last, in the form of a deputation to Mr. Chichester Fortescue, the President. It appears, however, that the Minister, though himself a resident in the neighbourhood, and therefore naturally interested in its scenery as well as its sanitary condition, did not offer much encouragement as to the way in which the object in view could be accomplished; for, although most of the parties concerned appeared to have ignored the fact that this was almost a purely sanitary question, the right honourable gentleman who received the deputation was probably aware that during the past six years the Richmond and (to be just) other local authorities have been trying hard "how not to do it" in the way of proper sewage disposal; that during that interval they have, from day to day, continuously polluted the banks of their river by pouring into that river the town refuse, and that they now call upon the conservators to remove (in whatever way these gentlemen please) the urban refuse that has spoilt, as well as defiled, a once navigable and very pretty stream. We record congratulations that the Richmond Vestry are not the riparian authorities of the Thames in their own particular district, inasmuch as, in accordance with the provisions of the Public Health Act of last year, the Corporation of London have sanitary jurisdiction over the river as far as Teddington Lock. And, as it appears to us that this will resolve itself into a purely sanitary question, the issue thereof must rest chiefly with the sanitary authority. And so, if the City Corporation, as the sanitary authority, can prove that the river is being polluted by sewage, and hence is dangerous to the health of the surrounding districts, it will be manifestly the duty of those districts to divert their sewage and clear away the nuisances that they have so industriously created and collected. It is well known that in the Thames the tide flows five, and ebbs seven, hours, so that the Barking sewage-nuisance theory may be dismissed without comment; and it appears to us, from a sanitary point of view, that the Richmond deputation did themselves very little good by the conference at Whitehall on Tuesday last.

THE QUEEN'S HOSPITAL AND THE ARTISANS OF BIRMINGHAM.

THE new wing of the Queen's Hospital, Birmingham, erected chiefly, we believe, by means of the subscriptions of the artisans of the town, was opened on the 7th inst. This new building, which, by special permission of the Prince and Princess of Wales, is to be called the Alexandra Wing, may be regarded as evidence of the high appreciation by the working classes of the benefits accruing to them from hospitals, and also of their recognition of the claim for support which these institutions have upon them as well as upon the wealthier ranks of society. That hospital relief is abused we are not prepared to deny, though we think the extent of the evil has been exaggerated. But the remedy for abuses that do exist in the shape of misdirected hospital succour must, in our opinion, be looked for, not in temporary expedients of doubtful value, but mainly in fostering a spirit of independence in the humbler classes, and in encouraging them to contribute, in proportion to their means, to the support of the charity on which they have been accustomed to rely for aid in times of sickness. From this point of view the example set by the workpeople

of Birmingham is exceedingly gratifying, and one which we hope to see followed in course of time by the members of their class in every considerable town of the United Kingdom.

ARSENIC IN THE HOUSEHOLD.

AN arsenical odour has occasionally been observed during the burning of green wax tapers or similar articles, and in consequence of this Mr. T. Bolas, of Charing-cross Hospital, was induced to examine several samples of green tapers, Christmas-candles, and so forth, with the view of ascertaining what colouring matters were used in their manufacture. Of thirteen samples one only contained arsenic, the majority being coloured with verdigris, and two samples were tinted with ultramarine green. The arsenical tapers were of the kind usually employed in houses for lighting gas, and one taper, weighing 17·69 grains, was found to contain 0·276 grain of arsenious acid. Now, considering the extreme sensitiveness of some people with regard to arsenic, especially when this poison enters the system by the respiratory organs, it will be obvious to all that it is highly improper to use a volatile poison like arsenic, even though the quantity employed is small, for colouring tapers or other similar articles intended for burning in houses. The case of a Christmas-tree brilliantly illuminated with arsenical candles may be taken as an extreme instance of the danger likely to arise from this source.

A short time ago Mr. Bolas had occasion to examine a sample of wall-paper containing 27·53 grains of arsenious acid in a square foot, and in this case the poison was so loosely fixed that a very slight attrition sufficed to detach a portion and diffuse it through the air as a fine dust.

EDINBURGH UNIVERSITY CLUB.

THE quarterly *réunion* of this Club was held in St. James's Hall on Wednesday evening last. After the discussion of business, about thirty gentlemen sat down to dinner, the chair being taken by Dr. Falconer, of Bath, supported on the right by Mr. Savory, F.R.S., and on the left by Dr. Lyon Playfair, M.P. Dr. Falconer, in referring to the fortunes of the Club, made regretful allusion to the late Dr. John Murray and Sir Henry Holland, both of whom had taken the deepest interest in its prosperity. The toast of "Alma Mater" was given by Dr. George Harley, who remarked on the advantages of studying at a university rather than at a hospital school. The continued advance of the University of Edinburgh, as attested not only by the increasing number of her students and graduates, but by the steady accession to the Club, was also the subject of congratulatory comment. Dr. Lyon Playfair proposed the "Sister Universities of Scotland," complimenting Glasgow on the munificence with which her citizens had reconstructed their *alma mater*, and St. Andrews on the alacrity with which she had brought her industrial neighbour, Dundee, under her academic wing. The toast of the Visitors, given by Dr. J. P. Steele, was acknowledged by Mr. Savory. The evening passed off most agreeably, enlivened by the vocal efforts of many of the members.

ADULTERATION OF BEER.

SIDE by side with the important question of the prevalence of alcoholic intemperance, we are continually encountering another question at the present day—viz., how much of the evil effects attributed to alcohol may be due to substances with which it is adulterated. In reference to this we have been interested in a report, in the *Lincolnshire Chronicle*, of some proceedings before the Spalding magistrates. Two publicans were charged with adulterating beer, and the offence was brought home to them by clear evidence. The adulteration was a particularly shameful offence in these cases, for the added impurities consisted of fusel oil and tobacco juice, in addition to the common fraud of a large proportion of salt and a certain amount of alum. The facts were proved by Dr. G. M. Lowe, food analyst for the county of Lincoln.

It is certainly a very serious matter to find two publicans simultaneously convicted of selling so villainous a mixture as this under the name of beer; and we trust that the food analysts all over the kingdom will set to work to ascertain whether, as seems probable, there exists any deliberate manufacture of a similar article on the large scale, or whether it is only an amiable weakness of the Lincolnshire publicans to poison their customers in this particular way. Fusel oil is bad enough as an adulteration of spirits, but if it be really to any extent employed in doctoring beer, which is the common drink of the labouring class, it is impossible to say how largely the supposed effects of mere drink—particularly its influence in causing insanity—have not depended upon this shameful system of tampering with an important article of daily food.

THE CAVOUR MEMORIAL.

"PAPA CAMILLO," as the consummator of Italian unity was affectionately called by the people, deserved all the encomiums lavished on him at Turin on Saturday; but his services to science were not adequately acknowledged. To say nothing of the Mont Cenis Tunnel, which but for him might yet be in the womb of time, or of the impulse he gave to agriculture in all its details, he was a vigilant patron of medicine, and the sciences on which it is based. Not only did he encourage native talent in that direction, but he did not hesitate to go beyond the Alps for men of worth in their respective departments. In the teeth of much clerical and municipal ill-will, he brought Moleschott, the greatest of Dutch physiological chemists, from Zurich to Turin, where he now forms one of the chief attractions of its flourishing university. To Cavour, indeed, military surgery almost owes its development in Italy, as all may judge who can compare the science as it was in the peninsula before and after 1859–60. Pity, indeed, that in the summer of 1861, by which time Italian unity was all but a *fait accompli*, medicine was not sufficiently advanced to save a life to which it owed so much!

MANNING OF THE NAVY.

STAFF-SURGEON SEATON WADE, R.N., has contributed some valuable notes in the Navy Blue-book recently published, on the general physique of the boys entered for the service during the past year. A total of 2544 boys were received, and of 1967 lads examined on board H.M.S. *Impregnable*, it appears that no less than 326 were rejected on medical grounds, the chief of which are thus epitomised:—Girth of chest below standard 58, weak development from unsound health 33, scrofula 16, varicocele 32, short and imperfect sight 54, decayed teeth 38, loss of teeth 10, and chronic skin disease 6. One of the rules for entry is that at fifteen years of age the circumference of the chest should measure 29 inches. This is a very high standard, to which comparatively few attain. Indeed, Surgeon Wade reports that though the directions for measurement are precise, two examiners seldom arrive at a similar result. Some boys are rejected for what is termed muscular tenuity, the test being an ability to support their own weight with either hand for at least five seconds. The writer considers that, as a whole, the examination on entering is too stringent, and rejects many lads who would afterwards develop into

strong men. The chief causes of invaliding in this, as in other branches of the services, are organic heart disease, phthisis, and chronic diseases of the lungs.

COURT APPOINTMENTS.

THE appointments among the medical attendants of royalty made in consequence of Sir Henry Holland's death are eminently satisfactory. In the President of the College of Physicians, the Queen will have an adviser who, should his services unfortunately be required, will bring to a consultation the long experience of a successful practitioner, the bearing of a polished gentleman, and a professional position requiring no artificial aids for its maintenance. Dr. Burrows succeeds to a baronet's position; we trust he may also shortly enjoy the honour of the red hand. Dr. Sieveking has been a member of the Prince of Wales's household for the last ten years, and his appointment as Physician Extraordinary to the Queen will give satisfaction to his numerous friends.

THE COLLEGE OF PHYSICIANS OF EDINBURGH AND THE MEDICAL COUNCIL.

THERE is to be one change at least in the *personnel* of the General Medical Council. Dr. Daniel Rutherford Haldane, honorary secretary of the Royal College of Physicians of Edinburgh, has been elected as the representative of the College in the Medical Council for the next period of five years, in place of Dr. Alexander Wood. Dr. Haldane will ably represent this popular College, with the policy of which he must be as familiar as most of its officials. But we shall all miss Dr. Alexander Wood, who had no superior in debate in the Council, and who has done very great service in various important committees. Dr. Alexander Wood also was always equal to the occasion when the reputation of his College was in question, and there can be little doubt that had he sought re-election he would have been again chosen. We sincerely trust that greater leisure will fully restore his health.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

AT the meeting of this Society on Tuesday evening last an exceedingly interesting paper was read by Mr. Jonathan Hutchinson, "On Abdominal Section and other modes of treating Intussusception." The paper was based upon a case of intussusception occurring in a young child on whom the author had successfully performed abdominal section, after other modes of treatment had been tried without good result. This was the first successful case reported in this country. The operation had been performed nine times; in four cases with a good result, and in five unsuccessfully. The author advocated its performance in those cases where the bowel had been down for a long time, and when all other means, as insufflation, injections &c., had proved useless.

VEXATIOUS USE OF THE MEDICAL ACT.

THE papers give imperfect reports of the hearing of a case by Mr. Partridge at the Southwark Police-court, in which Mr. Archer Farr was accused of using unlawfully the title of "surgeon." In another summons he was charged with unlawfully using the title of "Doctor." The evidence went to show that there was decided animus on the part of the complainants. Mr. Farr's qualifications, we believe, are L.F.P.S., L.S.A. Lond., and L.R.C.P. Edin. The judge thought that the prosecution had failed, and said that medical gentlemen had deposed that it was customary for men holding the qualifications possessed by Mr. Farr to use the titles he had used. Moreover, he denounced in strong terms the vindictiveness of the prosecution. He therefore dismissed the case with costs, to the amount of £5 5s. Though we entirely differ from Mr. Partridge here on the strict point of law, and deny that the qualification of L.R.C.P. carries the right to use the title of "Doctor," we rejoice in the defeat of the prosecution, which was evidently not instigated out of any regard to the Medical Act.

THE LONDON UNIVERSITY AND THE CONJOINT SCHEME.

DR. RICHARD QUAIN, F.R.S., and Mr. Cooper Forster, are announced as representatives of the University of London on the Committee appointed by the Royal Colleges of Physicians and Surgeons and the Universities of Oxford, Cambridge, and Durham, to complete the Conjoint Board of Examination in England. It is not encouraging to hear that the Committee should have met last week, but that a quorum did not muster. The fact strongly suggests the adage, "what is everybody's business is nobody's."

DUBLIN UNIVERSITY AND THE IRISH COLLEGE OF SURGEONS.

DR. E. H. BENNETT has been appointed Professor of Surgery in the University of Dublin, in the place of the late Dr. Robert W. Smith. Dr. Bennett is surgeon to Sir Patrick Dun's Hospital. Mr. Tuffnell has been elected Vice-President of the College of Surgeons. Mr. Tuffnell, who was a member of the London College and an army surgeon, settled in Dublin in 1845, and obtained the Fellowship by examination. He will become President in June next, and Professor Mapother is spoken of as his successor in the vice-chair.

MIDDLESEX HOSPITAL MEDICAL SOCIETY.

THE opening meeting of the 100th session of this Society was held on Thursday, the 5th of November, in the board-room of the hospital. The chair was taken by the president, Mr. Andrew Clark; several members of the staff were also present, and between sixty and seventy students and a number of visitors. After the opening address by the president, an interesting paper was read by Mr. H. H. Smith, on Erysipelas, with especial reference to its etiology. An animated discussion followed, in which a large number of the members took part.

A THREEFOLD MEDICAL MEMORIAL.

THAT a provincial town should give birth to three medical men of great eminence, at about the same period, is not an ordinary circumstance. This, however, is the case with the city of Tours, in France. Bretonneau, Trousseau, and Velpeau were born at Tours; the first having been the teacher and friend of the two latter. All three have been gathered to their fathers, and their fellow-townsmen, have decided to erect a monument, which shall include the three celebrities, and be placed in the principal square of the city.

THE VENTNOR HOSPITAL FOR CONSUMPTION.

THE National Hospital for Consumption, Ventnor, has just received two gifts of £1400 each from Messrs. Samuel and John Courtauld, of Braintree, Essex, for the construction of accommodation for twelve patients. The hospital is now rapidly approaching completion, there being but one block necessary to finish the design of the institution, which will consist of sixteen semi-detached houses, sufficient to accommodate over one hundred patients, each inmate having a separate bedroom. The chapel for the use of the patients is far advanced, and will be shortly opened by the Lord Bishop of Winchester.

INVALIDING FROM THE GOLD COAST.

WE believe that, in addition to the *Victor Emanuel*, which will be, *par excellence*, the floating hospital for the expedition, the troop-ships conveying the European force will remain off Cape Coast Castle during the time the troops are operating on shore, so as to act as auxiliary hospitals if necessary. The sick of the black troops will, it is believed, be treated in the hospitals on shore, and afterwards drafted off to Sierra Leone.

HEART DISEASE IN THE NAVY.

THE official returns from the naval hospitals, recently published, show, as usual, a large number of cases of aneurism. Seven were admitted during the year into Plymouth Hospital, 13 into Haslar, 4 into Chatham, and 1 into Haulbowline. The frequency of this disease among seamen of the merchant service has also been frequently remarked, and a special inquiry into its exciting causes would be both useful and interesting.

THE Society for the Suppression of Vice, in its laudable desire to improve the morals and repress the pruriency of the age, has put its veto on the photographs of the painted courtesans—all hair and legs—which embellish the windows of some of our photographers, cheek by jowl with the portraits of bishops and of reputable men and women. The learned magistrate before whom a recent case was discussed appeared to be considerably perplexed as to where the line of demarcation should be drawn between correct low-bodied evening dress and indecent exposure.

THE *Dublin Evening Mail* reports a case of some interest to Poor-law medical officers. At the last meeting of the board of guardians of the Nenagh Union, a bill of £2 was sent in by a medical gentleman for services rendered as *locum tenens* in the absence of one of the regular medical officers. Although the payment of the sum was recommended by the Dispensary Committee, the guardians refused to pay it on the ground that they could only pay for substitutes in cases of illness.

AT a meeting of the St. Andrews University Court on Monday, Principal Tulloch in the chair, the appointment of Patrick Anderson, Esq., M.A., as assessor from the General Council to the Court, was reported. Among other business, Dr. P. H. Watson, Dr. Alexander Keiller, Dr. H. D. Littlejohn, and Dr. G. W. Balfour, of Edinburgh, were reappointed Examiners in Medicine for the ensuing year.

THE Dublin Floating Cholera Hospital is now ready in the Liffey for the reception of patients. The ship is fifty-eight feet long by twenty-seven feet broad, and has a depth of ten feet and a half. The ward, which will accommodate twenty patients, is situate in the centre of the ship. The sanitary and ventilating arrangements are excellent.

OF thirty samples of milk which Dr. Dupré, food analyst for Westminster, examined, during the last quarter, nine only were found pure. All the samples had been purchased by the inspectors, while not one sample had been brought to them by private purchasers.

A DEPUTATION of the Sheffield Grocers' Association waited on Mr. Mundella, M.P., a few days ago, and urged upon him the desirability of Government undertaking the analysis of tea in bond, and so prevent adulterated tea passing into consumption through the Custom House.

AT an inquest held by Dr. Hardwicke on the body of an infant who died suddenly on Friday last, the jury expressed their regret that no post-mortem examination had been made. Dr. Hardwicke concurred with the jury as to the necessity of an autopsy in such cases, and upheld Dr. Lankester, who had been blamed by the Middlesex magistrates for holding unnecessary inquests. Eventually the cause of death was recorded as "convulsions," a very vague term.

MR. ROBERT MORGAN, C.E., an inspector under the Local Government Board, is now pursuing an inquiry into the sanitary condition of the township of Golcar, near Huddersfield. When the proceedings are completed we shall comment on the state of the district, which, judging from the evidence already given before the inspector, sadly needs the vigorous intervention of the health authorities.

THE first Quarterly Return of Dr. A. J. Bernays, food analyst for Camberwell, shows that 71 articles had been analysed. Of 61 samples of bread, 7 only contained alum. Dr. Bernays says that there is too much guess-work in the introduction of salt into bread, and advises bakers to add not more than half a pound to 100 lb. of bread.

WE would direct Mr. Frank Buckland's attention to the condition of the salmon in the river Blackwater, Ireland. A correspondent of the *Cork Constitution* says that the fish are sluggish, and are easily taken by any person. Lately several have been found dead, which on examination were found to be marked with irregular grey, mouldy spots.

THE late customers of the Dairy Reform Company have presented Dr. Murchison, F.R.S., LL.D., with a document, in which they express their admiration of his skilful and vigorous proceedings in tracing the origin of the late epidemic of typhoid fever to its true cause, by which the progress of the fever was arrested.

MR. BRUDENELL CARTER'S address, delivered at St. George's Hospital, has just been published. We characterised the lecture at the time of its delivery as remarkable, and those who had not the privilege of hearing the address may now read it, which we strongly advise them to do.

THE Bishop of Peterborough lately preached an eloquent sermon at the Lincoln Cathedral in aid of the funds of the County Hospital, when over £60 were collected. The hospital has also received a bequest of £100 from the late treasurer, Mr. C. K. Jarvis.

APPLICATIONS for medical relief are increasing so enormously in the Shoreditch district that the guardians have determined to put some check upon this run on the doctor by ordering the relieving officers to be vigilant and cautious in giving out orders.

ON the 1st inst. the Board of the University of Dublin appointed the following gentlemen as Examiners in Arts, who will be members of the Conjoint Examining Board for Ireland:—Classics: John William Moore. English: Edward Darden. Mathematics: Robert Ball.

THE differences existing between the St. Pancras Vestry and the Justices of the Peace respecting cow licences have been settled on the terms that each cow is to have a breathing space of 800 cubic feet.

THE consumption of horseflesh is rapidly increasing in Vienna. In the quarter ending Oct. 1st, 608 horses were slaughtered and converted into food.

AT a meeting of the trustees of the Hunterian Collection of the College of Surgeons, held on Saturday last, Mr. George Busk, F.R.S., was elected a member of the board, to fill the vacancy occasioned by the death of the Bishop of Winchester.

THE mortality in London last week rose to 28 per 1000 per annum. Of the deaths, 761 were due to diseases of the respiratory organs, an increase directly referred to the recent low temperature.

WE are authorised to state that Mr. J. H. Wharton was not a candidate for the Professorship of Surgery in the University of Dublin, as stated in THE LANCET of last week.

THE Printers' Society of Newcastle and Gateshead have presented their medical examiner, R. Ellis, Esq., with a handsome timepiece, in appreciation of his services to the society for the last ten years.

A GOOD deal of enteric fever is said to exist at Mevagissey, Cornwall. There is stated to be a great deficiency of closet accommodation.

DR. HENRY KENNEDY has been appointed Vice-President of the King and Queen's College of Physicians, Ireland.

AN inquiry into the sanitary condition of Brentford is now being made by Major Tulloch, Government inspector.

ST. VINCENT'S HOSPITAL, DUBLIN.

ABSTRACT OF DR. QUINLAN'S INTRODUCTORY ADDRESS.

AFTER some preliminary remarks, Dr. Quinlan said:—"In his immortal treatise on 'The Orator,' Cicero proved that perfect oratory is shown in the application to the purposes of eloquence of every branch of classical learning. So, in like manner, we may affirm that scientific medicine consists in the application to the investigation or relief of human suffering and disease, of almost every branch of natural and experimental science. Chemistry and botany are the ancient handmaids of medicine; but in latter days the sciences of electricity, of optics, of heat, of sound, of fluids, of practical mechanics, have taken their share either in physiological investigations or else in the examination or treatment of diseased conditions. All these departments of science have, within the lifetime of the present generation, made immense strides; and have, in fact, like astronomy, become departments of applied mathematics. Foremost among them is electricity, which is now so exact a science that the electrician is able to point out, in an Atlantic cable, the exact position of a flaw which is situated hundreds of miles from the shore and hundreds of fathoms beneath the sea. The other sciences are worthily keeping pace; but when we come to medicine we find that her scientific progress is not equal, and that, although a splendid and carefully cultivated art, she has not yet attained the degree of an exact science. And yet medicine has, within the last quarter of a century, accomplished some great discoveries which will stand the test of time and experience, and which are worthy of being placed upon the same pedestal as those of the circulation of the blood or of vaccination. Foremost among those I would place the introduction of the method of producing insensibility to pain in surgical operations, which it would not be too much to say has completely revolutionised operative practice. Formerly the great aim of the surgeon was to accomplish his awful but necessary duty to his agonised patient as rapidly as possible, and a clinical clerk, with a watch, always stood by to note the time so occupied. Mr. Herbert Mayo performed amputation at the hip-joint in 90 seconds. Mr. Edward Hutton, whose resident pupil I had the honour of being, amputated at the middle of the thigh in 78 seconds; and I have heard M. Jobert de Lamballe pronounce not very slowly the words *un, deux, trois*, while he with lightning speed removed an arm at the shoulder. We have changed all this; we operate, like the sculptor, upon an insensible mass; we go carefully through our work; and, although accomplishing it as quickly as we can, we do not count the seconds. A new class of operations, under the title of conservative surgery, has, to the great benefit of humanity, sprung up, in which we endeavour to carefully remove the precise site of disease or injury, and to leave for future use the surrounding structures. For instance, in incurable diseases of the knee, instead of amputating the thigh, the surgeon now removes the actual diseased joint, and leaves the sufferer with a whole limb, stiff at the knee, but as good for walking as ever. This operation, like the old revolving pistol of the time of Henry VIII., contained in the Tower Museum, is an example of a discovery made long since, but abandoned because it could not be put in practice..... Both in chloroform and ether Dublin practice has been distinguished for efficacy, and, above all, for safety, beyond many neighbouring capitals, and our ratio of fatal cases has been amazingly low. This has been solely attributed to the complete knowledge on the part of the Dublin faculty of the conditions of safety in anæsthetics, and to their care and caution in using them. Notwithstanding our favourable experience of chloroform, it has occurred to Dublin surgeons that perhaps the original though disused agent, ether, might prove the safer of the two. On this question being ventilated, a committee was appointed in our College of Surgeons to consider it; and I refer to that committee with pride, because in this matter medicine will assume the attitude of an exact science. All the hospitals of Dublin are associated together in the great work. Every case of ether or of chloroform occurring in them is carefully tabulated on a fixed uniform schedule. All the facts will thus be ranged into a focus, and by a process of scientific induction a really correct result will be obtained. The application of spectrum analysis to medicine is still in its infancy, but has accomplished already some great things. By it we are able to detect, with extraordinary accuracy and delicacy, changes in the oxidisation and carbonisation of the blood, the presence of minute quantities of bile in the blood and secretions, and many other important pathological phenomena. The ophthalmoscope, the instrument by which we behold the interior of the living eye, is daily becoming more and more important, not only to the oculist, but to the general physician, for the diagnosis of diseased states of the brain. The tympanic auriscope begins at last to give us some real information as to the amount of action of an affected ear. The living, acting larynx—the wonderful organ of the voice—is no longer a sealed book to be guessed at by the comparison of symptoms. The laryngoscope enables the physiologist to watch its action, and the surgeon to examine and treat its diseases, even to the removal of polypi or the medication of ulcers..... Upon the triumphs of the microscope it would be superfluous to speak. It would not be too much to say that it has built up the modern edifice of physiology and pathology. I would merely impress upon you the necessity of making yourselves practically familiar with the appearances under the microscope of every variety of natural tissue, both in its healthy and its diseased states; also with as many abnormal ones as possible. It is not sufficient merely to examine—you must also learn with your own hands to measure, and, with either the camera lucida or the reflector, to draw microscopic objects. You must also practise yourself with the polariscope and all the other apparatus used in connexion with microscopic research. Last, though not least, I would allude to the ingenious endoscope for viewing some of the interior cavities of the body. This, as well as all the other appliances which I have mentioned, you have had and will have abundant opportunities of viewing in the course of the session, both in the laboratory and in the wards. Up to a recent period nearly all the therapeutical agents were made to act,—firstly, upon the general system—usually through the stomach—and then upon the local part affected. These last few years a great improvement has been accomplished by injecting under the skin of the part affected small quantities of the active principle of different powerful remedies, so as at once to affect the part,

but not the system. You have all seen, and the seniors among you have practised under our direction, the subcutaneous injection of the active principle of opium, by means of which the acute local pain is relieved without stupefying the patient. You have all seen dangerous bleeding of the lungs or of the nose checked by the similar use of ergotin. The lowered pulse showed the active effect of the drug, but there was no dangerous symptom produced by this active poison. Similarly you have seen strychnine employed in cases of local paralysis, stimulating the affected part without distressing the system. I need not impress upon any of you the necessity of general chemistry and of chemistry applied to medicine. On the portals of both physiology and of medicine is inscribed, 'Let no one ignorant of chemistry enter here.' In fact, to study either one or the other without an efficient knowledge of organic chemistry is now impossible. I would merely direct your attention to the extreme elegance and facility of volumetric analysis for the quantitative determination of sugar and of albumen in the secretions. Another quick and admirable method of accomplishing this depends upon their influence upon the polarised ray of light. Diabetic sugar can be rapidly and accurately read off by the very ingenious saccharometer invented by Mr. Jellett, or by that of M. Soleil. I wish I could say the same for albumen. Its indefinite and changing character renders it more difficult to deal with in this manner. I am, however, engaged in the problem, and do not despair of success. For the purpose of following up effectually the study and the teaching of the application of chemistry and the physical sciences to medicine, it became evident that a special laboratory was required; and I am happy to say that last session we succeeded in carrying out this most useful improvement, by means of which we were enabled to give complete practical courses upon all the instruments and appliances to which I have alluded."

After some practical advice to the students, he continued: "The more that you devote yourselves to these practical studies the better. All the examinations—both those necessary for obtaining your diplomas as well as the higher and more important competitive trials for entrance into the public services—have this turn. In fact, the former are now the reflection of the latter. When I passed my professional examination the business consisted simply of verbal questions and answers in neatly-furnished halls; but any candidate could have been prepared for such examinations without even entering a hospital, laboratory, or dissecting-room. It was simply a matter of memory, and, in fact, the merely crammed candidate could probably have made a better figure than the practical man. All is changed now. At the great competitive examinations, and even at the diploma examinations, you will be required to make dissections and perform operations on the subject, to diagnose and treat cases in hospital, to identify and use every kind of medical and surgical apparatus, to identify and describe specimens of the materia medica, to perform chemical operations and analyses, and to examine and identify a variety of physiological and pathological specimens microscopically or otherwise; to use medico-scientific apparatus, and to write medical reports. If you can practically and thoroughly do all this, you are really fit to be entrusted with the lives of your fellow-creatures. But let me tell you that to learn to do all this in four years you must commence from the first day, and think of nothing but the great field of duty and responsibility which lies before you."

Dr. Quinlan concluded by expressing his hope that five years hence he might be able to hold up the new students who were commencing that day as an example of progress and industry to those who would then be beginning their profession.

PRESENTATION.—In recognition of the services rendered by Dr. Bond to the Hartley Institution, Southampton, it was resolved on the occasion of his leaving the town to enter on the duties of medical officer of health for Gloucestershire to present him with a testimonial. The presentation was made in the council room of the Hartley Institution by the Mayor, the testimonial taking the form of a valuable binocular microscope, accompanied by an illuminated address enclosed in an Oxford frame. Attached are the signatures of fifty-two subscribers.

Correspondence.

"Audi alteram partem."

POST-MORTEM EXAMINATIONS AND CORONERS' INQUESTS.

To the Editor of THE LANCET.

SIR,—My attention has been directed to a paragraph taken from THE LANCET, relating to an inquest held by me on a woman named Maria Hill. As that paragraph was evidently written under a misapprehension of the facts, you will, I know, allow me to explain the matter.

On the 15th September, a woman named Sarah Row was taken ill in a street in Plymouth. She got into an inn, where she became insensible, and was then seen by a surgeon, who pronounced her as, in his opinion, suffering from apoplexy. She was taken to the workhouse, and died there. The medical officer, with the coroner's officer, saw me, and I at once directed a post-mortem examination, which was made. I held an inquest the next day, the 16th, when medical and other evidence was given, and a verdict returned.

On the 17th the Board of Guardians met, and reflected strongly on their medical officers. I enclose a report of their remarks. As I considered that the board of guardians had no business to interfere, I determined that I would, on the very next opportunity, adopt a course which should obtain from a jury a definite expression of the right of the coroner to hold an inquest and order a post-mortem examination without being interfered with by the guardians.

On the 5th of October, the medical officer of the workhouse was requested to call on me in reference to the death of Maria Hill. He, with the master of the workhouse, detailed the facts, and stated that he could only form an opinion. I then told him that as he was an officer of the board, and subject to their caprices, I desired that he would not hold a post-mortem, but merely attend the inquest, when I would explain the matter to the jury, and take their opinion on the facts.

On Oct. 6th I held the first inquest at the workhouse, explained to the jury, a more than ordinarily intelligent one, the reason for the action I had taken; expressing my opinion that post-mortem examinations should be made in all cases of sudden death, and also animadverting somewhat strongly on the (as I considered) unwarrantable interference of certain members of the board of guardians.

The jury, with one exception, not only endorsed all my remarks, but thanked me for acting as I had done, and passed a resolution that the question of post-mortem examinations should be left entirely in the hands of the coroner, after consulting with the medical man. The one exception to which I refer was a juror ("the sensible juryman" mentioned in your article) who objected to the waste of time, and wanted then and there to return a verdict on the medical officer's opinion, without "the expense" of a post-mortem examination, or "the waste of time caused by assembling again." He was overruled. The adjourned inquest was held, the post-mortem disclosed a totally different cause of death from that suspected, and the jury returned their verdict. Then "the sensible juryman" complained of the waste of time, and said the post-mortem should have been made before the first inquest.

The foreman of the jury, a tradesman of good standing in the town, whose time was probably many times as valuable as that of "the sensible juryman," again thanked me for himself and brother jurymen, and has since expressed to me and the coroner his gratification at the course adopted by me. You will thus see that, in this instance at least, I am not to blame for adopting a course calculated to strengthen the hands of the medical officer and the coroner.

I am most strongly of opinion that a post-mortem examination should be made in every instance in which there can be a doubt as to the cause of death. Having been myself intended for the medical profession, I have attended and assisted in making many such examinations, and am, therefore, perhaps better able to understand their value and

necessity than others of my profession who take merely a legal view of the matter.

Apologising for trespassing on your valuable space,

I am, Sir, yours truly,

ELLIOT SQUARE,
Deputy Coroner for the Borough of Plymouth.

Plymouth, Nov. 7th, 1873.

*** We congratulate the Deputy Coroner on having intelligent jurymen to support him. Mr. Square's letter is very satisfactory as showing that he has a higher idea of a coroner's inquiry than is implied in passing a formal verdict without having any facts on which to base it, and that he fully appreciates the indispensableness of medical evidence. We still are of opinion that on his own authority alone, and in a spirit of independence towards the guardians, he should have ordered a post-mortem examination in the first instance in the case of Maria Hill, though we appreciate the kindness of his motive in taking the course which he did take. We entirely agree with the jury that the question of post-mortems should be left entirely to the coroner. Guardians are good men, but it is unkind to refer any question involving outlay to them, and they respect independence in other authorities.—ED. L.

PROFESSIONAL REMUNERATION.

To the Editor of THE LANCET.

SIR,—There is an aspect of this question which I desire to place before your readers. I fully recognise the utility of consultees, and I can bear witness to their ability in this neighbourhood. I still further recognise the right which every patient has, not only to ask for a second opinion, but even to obtain that opinion without my knowledge or consent. But I do protest against the system which exists here, and, for aught I know, in many other provincial towns, of so lowering the charges for consultation practice that the patient can in many instances obtain the regular attendance of the consultee at a charge little if anything more than he would incur by employing his own medical attendant. The fee for a consultation here, either at the consultee's house or at the patient's, with the general practitioner is one guinea, it being understood that this is to include a second visit. Now this simply degrades the fee to half-a-guinea—not by any means a respectable honorarium for a physician of standing. But worse than this remains to be told. It is well known that leading physicians will attend a patient at his own house, take his guinea, and call a second, third, fourth, nay, even a fifth time for the same fee. The public are asked to believe, and they do believe, that Dr. A, the consulting physician, is a very superior sort of person to poor Mr. B the general practitioner; and at the same time the public finds out that the superior person can be got at the same price as the inferior, therefore the public employs the superior person. The result of this is that the position of a consultee in this neighbourhood is not unfrequently degraded to that of a second-rate general practitioner, whilst the general practitioners are often deprived of their patients, and, as a consequence, mulcted of their earnings. The remedy for this is, of course, for the consulting physicians to take a guinea fee for each consultation. They will decrease, no doubt, the number of their patients, but they will not in the end lose by the change. At any rate they will regain that which they are fast altogether losing here—the confidence and respect of the profession.

I am, Sir, yours faithfully,

Devonport, Nov. 1873. W. P. SWAIN, F.R.C.S.

"DISEASES OF THE DEAF AND DUMB."

To the Editor of THE LANCET.

SIR,—My attention having been directed to a medical annotation on diseases of the deaf and dumb, in your issue of Saturday, September 8th, I would wish, in consequence, to make two remarks.

1st.—That since your annotator visited the asylum the committee have increased the quantity of milk given to the children, by one-half of what they had been in the habit of receiving, so that each child now gets daily three-quarters of a pint of pure milk.

2nd.—That it is quite a mistake to suppose that it is my opinion that lip-teaching is not applicable to the children of the class whose benefit is contemplated in this institution. At the same time it is quite another question as to how far they may derive advantages from it when mixing with associates in the class from whence they come, in comparison with those, similarly afflicted, who have the good fortune to derive their origin from, and, subsequently to their education being completed, only to be associated with, the more cultivated classes.

I am, Sir, yours obediently,

JAMES H. WATSON.

Asylum for the Deaf and Dumb, Old Kent-road, S.E., Nov. 12th, 1873.

A STRANGE STORY.

To the Editor of THE LANCET.

SIR,—Before the subject and witnesses of it pass away, allow me to record, in a few words, a strange story.

Eli H——, aged about seventy-five years, is now living in a village near this town. Before he was born, his father made a vow that if his wife, then pregnant, should bring him a girl, she having had three in succession, *he would never speak to the child as long as he lived.* The child turned out to be a boy. And now what is most strange and remarkable occurred. *This boy would never speak to his father.* Moreover, during his father's lifetime, he would never speak to anyone but his mother and three sisters. As soon as his father died, he being then thirty-five years old, his tongue was unloosed to everyone, and he has remained an ordinary loquacious individual ever since.

The verification of this strange story is easy enough. Every one in the village was acquainted with "dumb Eli," and numerous living witnesses remember his dumbness passing away.

Of course this man's condition was popularly regarded as a judgment. It was at least a most curious instance of mysterious influence which may be interesting to many of your readers.

I am, Sir, your obedient servant,

Glastonbury, Nov. 6th, 1873. F. MATHEW.

BIRMINGHAM.

(From our own Correspondent.)

THE long vexed question as to the salary of the gaol surgeon has at last been settled, by the Town Council yielding to the recommendation of the justices, that the amount should remain as it formerly was in Dr. Hill's time—viz., £200 per annum. Even with that salary, it is thought that the number of local candidates will be very small, as the onerous nature of the duties to be performed is too well known, and the amount of work is constantly on the increase.

The "amalgamated charities" of the town, which this year consist of the Dispensary, Children's Hospital, Homœopathic Hospital, Eye Hospital, Orthopædic Hospital, Ear and Throat Infirmary, Dental Hospital, Sanatorium, Lying-in Charity, Women's Hospital, Institution for the Blind, and Institution for the Deaf and Dumb, will have £5200 divided between them as the result of the collections on "Hospital Sunday." These charities have never received so large an amount since the movement was instituted, and this in spite of the fact that both Dudley and West Bromwich, from which towns collections were formerly received, have now a Hospital Sunday for their own hospitals.

The report of the Medical Officer of Health for the past quarter shows a death-rate of 25·15 per 1000. The total number of deaths amounted to 2235, and of these the greatest proportion is from diarrhœa and scarlatina. 534 deaths arose from the former, of whom 368 were under one year of age; and 159 from the latter disease, nearly all of them being infants. The deaths from small-pox were 18, as compared with 29 in the first and 37 in the second

quarters. Dr. Hill calls for greater caution as to the association, in schools and other places, of healthy children with those who have recently recovered from zymotic diseases. He still complains of the frequent sewage contamination of the well water, and shows that it is most often found where zymotic disease exists.

The Orthopædic Hospital held its annual meeting last week. Dr. Warden read the medical report, which showed that 675 patients had been admitted, of whom 50 were cured, 112 relieved, and 56 remained under treatment. The number of operations performed was 424, of instruments supplied 412. The Bishop of Worcester, in moving the adoption of the report, hoped that the hospital would soon be located in more convenient and larger premises, and so have increased power of doing good.

The new out-patient department of the Queen's Hospital, which has cost above £15,000, was publicly opened by the Mayor on Friday last, when a large gathering of the friends of the charity and of the medical officers of all the charities of the town took place. Lord Wrottesley, the Bishop of the diocese, Dr. Bell Fletcher, and Mr. Gamgee addressed the meeting, and pointed out the advantages which the new building would confer on the town and on the hospital, not only from their convenient arrangement and suitability for out-patients, but also from the fact that they would enable the main hospital to accommodate from eighteen to twenty additional in-patients. The Mayor, with great liberality, afterwards entertained the hospital committee, medical staff, and principal visitors at dinner at the Queen's Hotel, and in the evening further celebrated the event by giving a grand ball in the Town Hall.

At the first meeting of the Midland Medical Society, Mr. Wilders, president, in the chair, Dr. Sawyer presented a specimen of aneurism of the abdominal aorta. Mr. Gamgee, an amputated thigh with numerous enchondromata on the femur and tibia; Mr. West, for Dr. Partridge of Stroud, a case of carcinoma of the tibia (peripheral); and Mr. Gilbert Smith a couple of ovarian cysts. Dr. Crespi then read a paper on the "New form of the Club system known as Provident Dispensaries." Sir Henry Thompson honoured the members on the 8th inst. with his presence at a conversazione at the Great Western Hotel, and gave an interesting address, which was listened to with great attention, "on the future of operative surgery in relation to stone in the bladder." As this paper will appear *in extenso* in THE LANCET it is unnecessary to give a *résumé* of it, but it was marked by the author's usual clearness and brilliancy, and by his thorough knowledge of the subject. Sir Henry Thompson was afterwards entertained at supper, and in returning thanks for his health, he alluded to his operation on the late Emperor of the French as follows:—"The time would come—and he should demand that time—for those charged with making known what was to be known about the case, to do so. After all, it was a plain, straightforward case, such as they and he saw in the hospital every month or two; but the position of the personage made it so much more interesting. When the time did come—and it would come one of these days—he should insist that all the particulars of the case should be made known, and he should not flinch from any verdict which his professional brethren might give. He was ready to rest any reputation he might have upon everything he did in that case, and he might venture to say, in connexion therewith, that he did not look back with regret upon anything he counselled or did, and that he should be able to prove when the time came."

Dr. Sawyer was this day appointed acting physician, Mr. Evans acting surgeon, Mr. Fowler dentist, and Dr. Welch extra-acting physician to the Children's Hospital; all the appointments except the first were keenly contested.

Birmingham, November 10th, 1873.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

AT the last meeting of the Northumberland and Durham Medical Society the high rate of mortality prevailing at present in Newcastle was a subject of discussion. Drs. Charlton and Humble thought that among the general practitioners of the town "there was little doing," notwithstanding the high rate quoted by the Registrar-General. The town had every facility for thorough drainage, and there was less than the usual evidence of overcrowding. Dr. Humble thought it was reasonable to suppose that there was some error in the calculations, arising from the rapid increase of population. He also spoke of the great want of power to remove cases occurring in dispensary practice, and advocated prompt isolation of all sufferers from zymotic disease. A case of typhus in tenement property was a *nuisance*, and as such should be removed. Forty years ago it was the custom for one of the Fever Hospital officials, who was termed the inspector, to visit the houses which contained fever cases, for the purpose of disinfection. This had fallen into disuse.

Dr. Gibb related the following case of scarlatinal infection from milk:—He was called to a tradesman's daughter attacked with scarlatina. The family had only been settled in Newcastle for two months, and as they had but few acquaintances and there was no scarlatina in the street where they lived, the father, a nervous and fidgetty man, was very anxious to know how it had been introduced into the house. After some inquiry it was found that their milk was supplied from a dairy at the edge of the Town Moor, that it had been brought to the house by a young daughter of the dairyman until three weeks before; that then a son of the dairyman had brought it, and a week before the tradesman's daughter was attacked the dairyman himself had brought it. On investigation, it was found that the whole of the dairyman's family were down with scarlatina, and one had died. The dairyman's house consisted of two rooms; in one was the family down with scarlatina, and in the other the milk lay in pails until delivered. The children of the tradesman were in the habit of having milk to their breakfast and tea, and the one attacked was the only one who had not in infancy had scarlatina.

Dr. Wiltshire, of London, whose presence at the meeting was gracefully alluded to by the President, Dr. Philipson, spoke as to the defects in sanitary legislation, especially as to the appointment of health officers, some of whom were under Government control, and some not. He thought all officers should be appointed by the Local Government Board, if we were to expect united action throughout the country. He thought that the infection in Dr. Gibb's case had been most likely conveyed *in milk*.

Mr. H. E. Armstrong thought that the reported high death-rate was probably less due to inaccuracy in the estimated population of Newcastle than was thought by Dr. Humble. The death-rate had not been at the continuously high standard of 40 per 1000 living, and had recently fallen to a much lower figure. There had been an unmistakably large amount of sickness in the public practice of the town. The dispensary returns for the year ending August 30th showed a higher number of admissions than had ever before been recorded, and an increase of 20 per cent. on the admissions of the last four years. This, Mr. Armstrong said, was the more remarkable from the fact that the recently-instituted Children's Hospital had been treating two or three thousand cases in the year, which would otherwise have come to the dispensary.

November 11th, 1873.

PARIS.

(From our own Correspondent.)

ONE of the last numbers of the *Journal Officiel* contains a most interesting statistical article on the veritable epidemic of suicide which, during the last few years, has been stated to exist in this country. From the figures drawn up by the author of the article, it appears that during the year 1871, 4490 acts of suicide were accomplished; 3596 by men, and 894 by females. Out of the above number of cases, 164 individuals had not attained their majority; 1125 were aged from twenty-one to forty; 1782 from forty to sixty; 1362 above sixty; whilst the age of 57 among them was unknown. As to the married or single condition of 4324 of the individuals who had committed suicide, and concerning whom authentic information could be gathered, the following figures are given, and are of great interest:—1410 single people; 1443 married with children; 676 married without children; 484 widows and widowers with

children; 311 widows or widowers without children. More than six-tenths (2699) inhabited rural communes with a population of not more than 2000 inhabitants, whilst 1723 inhabited towns. Another interesting item is the mention of the peculiar manner in which death was brought about. Thus it appears that out of the total number of 4490 cases of suicide, in 1991 it was produced by strangulation; in 1278 by drowning or submersion; in 591 by gunshot wounds; in 215 by asphyxia with coals; in 152 by cutting instruments; in 143 by a wilful fall from heights; 70 by poison: 50 by various other means. As to the supposed motives which led to the committal of suicide, in only 4077 cases was the cause made out. In 1472 cases suicide is attributed to mental disease; in 950 to anguish or pain of various kinds (out of which 535 to physical pain); 651 to bad conduct (out of which 492 to drinking); 620 to family griefs; and 369 to misery. In 15 cases suicide was committed by the authors of great crimes.

A short time ago Dr. Girrier, one of the head inspectors of the army, was sent off to St. Etienne by the Minister of War to investigate a most singular epidemic which is prevailing among the troops quartered there, and concerning the true character and origin of which nothing is as yet known. At the time the inspector was sent to St. Etienne two hundred soldiers of the 75th regiment of the line were suffering, and the means employed to combat the disease had all failed. The epidemic consists in a swelling of the thyroid gland. Not one of the soldiers affected with the disease has been cured. Iodide of potassium has proved quite useless; several soldiers who had been sent out of the wards for a change were returned to them, their condition getting worse; and the sub-officers, who at first were exempt from the epidemic, are beginning to be stricken. It has also extended to another regiment, the 96th, and to a battalion of cavalry. What is very singular is, that not one individual belonging to the civil population in the neighbourhood has contracted the disease. As soon as the results of Dr. Girrier's researches are made known I shall return to this curious subject.

The epidemic of cholera has undergone a very marked decrease during the last fortnight. The number of deaths for the week ending three weeks ago was 57; week before last it fell to 27; and last week to 20. This steady decrease is observed not only in the mortality in town, but also in the military and civil hospitals of the capital, and is therefore general.

The question of liberty of teaching in the higher branches of education will shortly be brought before the National Assembly to be definitely settled. M. Laboulaye, Professor at the College of France, who was appointed by the Commission as their reporter, has just published a voluminous report on the subject. It is much too compendious to be analysed after a first rapid glance, and I purpose to return to it in some future letter.

A *concours*, or examination by public competition, has just taken place at Nantes, concerning one feature of which you will like to hear a few remarks. It appears that one paper was especially considered worthy of notice—that of a Madame Ribard, who has just entered her career as a female student of medicine, and it has received a prize, which was divided between the successful authoress and two other (male) competitors. Madame Ribard is already a Bachelor of Letters and a Bachelor of Sciences. Her paper is thus spoken of in a report on the *concours*:—"The elegance and precision of style heighten the value of this production, and almost cause the reader to forget the few inaccuracies which have crept into the anatomical description, and the shortness of the question of chemistry." I know not how it is, but I cannot help thinking that this judgment smacks of gallantry. The questions treated of were "articulation of the knee" and "calomel."

The Faculty of Nancy (being the former French one of Strasburg) has just inaugurated its winter session under improved circumstances. It is stated that all the laboratories have been enlarged; whilst, thanks to the combined efforts of the municipal authorities and the administrative commission of hospitals, it is now provided with four complete clinical services, which are amply sufficient for all the purposes of clinical teaching. A new hospital has been founded with the object of completing the necessary arrangements.

Paris, November 11th, 1873.

Obituary.

GWYNNE HARRIES, M.D.

ON the 8th inst. died, in the Fever Hospital, Islington, Gwynne Harries, M.D., one of the medical inspectors of the Local Government Board. The illness which was fatal to him furnishes a painful illustration of the risks to which the inspectors of Mr. Simon's department are exposed in the performance of their duties. Dr. Harries, during the fortnight preceding the 4th inst., was engaged in an inspection of several localities in Durham, with reference to the state of vaccination, and, in certain of them, to the prevalence of typhus and scarlet fever. On the 4th inst. he became out of sorts, but he continued his inspection till the evening of the following day. Feeling then to be quite unfitted for his work, and suffering, as he thought, from a sharp attack of catarrhal sore-throat, he travelled to town from Newcastle by the night mail. During the 6th the inflammatory condition of the throat became more severe, in the evening of that day symptoms indicative of grave disturbance of the system manifested themselves, and before daybreak the next day the eruption of scarlet fever appeared profusely over the whole body. On the morning of the 7th Dr. Harries was removed from the hotel in which he was staying to one of the reserved rooms in the Fever Hospital, Liverpool-road, Islington. Throughout that day and the following night there was a general abatement of the graver symptoms, but in the early morning of the 8th a paroxysm of excitement occurred, succeeded by formidable prostration. Other paroxysms followed, and at two in the afternoon he died.

Whatever medicine and the most solicitous care could compass to ward off the fatal result was done by Dr. Broadbent, Dr. Robert Liveing, and Mr. Fred. H. Mahomed, aided by Mr. Simon, but without avail.

Dr. Gwynne Harries was a son of Mr. H. B. Harries, of Haverfordwest. He studied at King's College, where he gained the Warneford Scholarship and other honours. He was a member of the Royal College of Surgeons, and licentiate of the Apothecaries' Society, and he graduated in the University of London, taking his M.B. degree in 1863, and his M.D. in 1865. After having been in practice several years at Pembroke Dock, where he gained much of that experience of vaccination and of the sanitary requirements of communities which he brought to his official work, he was appointed a medical inspector of the Privy Council shortly before the transference of the Medical Department of the Council Office to the Local Government Board. He married a daughter of Dr. Giles, long in practice in Hackney, who survives him. He had no children. His age was thirty-three.

The estimate in which Dr. Harries was held by his immediate official chief and by his colleagues, as well as the mode in which he performed his official duties, has been recorded by Mr. Simon himself in the following letter to the Editor of *The Times*. It would be idle to add to Mr. Simon's words anything but an expression of our entire sympathy with them.

"Sir,—In respect of the office I hold, I beg you will allow me to add a few words to the announcement which your advertising column contains of the death, at the age of thirty-three, of Dr. Gwynne Harries, one of the inspectors in the Medical Department of the Local Government Board.

"From the time, about two and a half years ago, when Dr. Harries entered this branch of the public service he had identified himself, heart and soul, with our work. Having brought into it attainments and moral qualities of a very high order which would have won him success and honour in any career of life, he had given them with enthusiasm to his duties, and he had been prized among us as he so highly deserved.

"On Thursday last he returned to London from the North of England mortally stricken with fever, which he had caught in the performance of his duties. In one of the reserved rooms of the London Fever Hospital, the value of which for emergencies of this sort can hardly be over-estimated, he

had every possible skill exerted for him, and with every possible kindness and sympathy; but it was in vain, and on Saturday his disease ended in death.

"For the officers of the department from which Dr. Harries has been taken, I may simply and truly say that we are all in sorrow for our colleague, that we shall ever remember him with sincere esteem, that we shall miss him as a brother in our work.

"To Dr. Harries's family—to those who have to deplore an irreparable private loss in this early close of a life which abounded in vigour and promise, and seemed destined for a long career of happy usefulness—it will, doubtless, even now, be some consolation to reflect that he died in obedience to the claims of the public service, doing his professional duty in work which is full of hope for others. Like many who have wept for the fallen of far different battle-fields, they have lost their dearest in the service of their country; but of the civil servant, as of the soldier, no better memory can remain than that his loyalty, even unto death, has been true to the standard under which he served."

Medical News.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent second M.B. examination:—

FIRST DIVISION.

Addy, Boughton, St. Thomas's Hospital.
Barlow, Thomas, B.Sc., University College.
Bonham, Henry James, University College.
Bird, Cuthbert Hilton Golding, B.A., Guy's Hospital.
Bomford, Gerald, King's College.
Cockburn, John Alexander, King's College.
Colgate, Henry, University College.
Coupland, Sidney, University College and Middlesex Hospital.
Dodson, Andrew, Birmingham and Guy's Hospital.
Dyson, William, B.A., University College.
Firth, Charles, St. Bartholomew's Hospital.
Harvey, Charles William, University College.
Petch, Richard, King's College.
Pope, Harry Campbell, Liverpool Roy. Infirm. and Univ. College.
Railton, Thomas Carleton, Manchester and St. Barthol. Hosp.
Rayne, Charles Alfred, University College.
Skerritt, Edward Markham, B.A., University College.

SECOND DIVISION.

Appleyard, John, University College.
Baber, Edward Cresswell, St. George's Hospital.
Bindley, Philip Henry, University College.
Cornelius, Walter Bernard, University College.
Lewtas, John, University of Edinburgh.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 6th:—

O'Brien, James Octavius, Guy's Hospital.
Scott, Edward, Stockland, Devon.

The following gentleman also on the same day passed his Primary Professional Examination:—

Johnson, Chadd Moore, Guy's Hospital.

QUEEN'S UNIVERSITY IN IRELAND.—At the recent examinations the following gentlemen obtained the diploma in Midwifery:—

George W. F. Armstrong, Ringrose Atkins, J. Lane Corbett, Louis Richd. Dawson, Robert Kerr Eccles, Thomas J. Gallwey, Michael Gillespie, Alfred J. Gilmour, David Johnston, Edw. H. Kelly, Wm. Y. Kingston, Richard R. Leader, Hugh M'Millen, Aurelius Victor Maybury, William Molloy, John James Morris, Douglas Mullen, Jariath J. Mullen, John William Nicholls, Richard Frith Quinten, William Rutherford, William Simpson, Carew C. Howard Smyth, Michael Sweetnam, Michael Wash, John Wheeler, John Forsythe Wilson, Alexander Wylie.

THE Rev. Canon Callaway, M.D., has been consecrated as a Missionary Bishop for Independent Caffraria, at St. Paul's church, Edinburgh.

C. QUINTON, M.R.C.S., Medical Officer of Health and Public Vaccinator, Egton District, Whitby Union, has a second time within the last four years been awarded the extra premium, amounting to £7 18s., for successful vaccination.

STATISTICAL SOCIETY.—The first ordinary meeting of the present session will be held on Tuesday next, the 18th inst., at the Society's Rooms, 12, St. James's-square, when the President, Dr. William A. Guy, F.R.S., will deliver an inaugural address. The chair will be taken at 7.45 P.M.

DR. JOHN JAMES HILL, of Lambton, Australia, has been appointed a magistrate of the territory.

ST. JAMES'S PALACE, NOV. 6TH.—The Queen has been pleased to appoint George Burrows, M.D., F.R.S., and Physician Extraordinary to Her Majesty, to be one of the Physicians in Ordinary to Her Majesty, in the room of Sir Henry Holland, Bart., M.D., F.R.S., deceased. The Queen has also been pleased to appoint Edward Henry Sieveking, M.D., to be one of Her Majesty's Physicians Extraordinary.

Medical Appointments.

AUSTEN, J., L.R.C.P.L., M.R.C.S.E., has been appointed a Consulting Surgeon to the Ramsgate and St. Lawrence Royal Dispensary, on resigning as Surgeon.

BANDON, A. B., M.R.C.S.E., has been appointed House-Surgeon to King's College Hospital.

BARRY, J. W., L.R.C.P.L., M.R.C.S.E., has been appointed an Hon. Surgeon to the Ramsgate and St. Lawrence Royal Dispensary.

BERNARD, F. R., M.B., C.M., has been appointed Assistant-Surgeon to the Convict Prison, Portland, vice Barker, appointed to the Millbank Prison.

BUCHAN, C. F., M.B., C.M., has been appointed Medical Officer for District No. 2 of the Bridgwater Union, vice Bent, resigned.

CAMPBELL, R. A., M.B., C.M., has been appointed Assistant House-Surgeon to the Halifax Infirmary and Dispensary, vice Hoyle, promoted.

CAMPBELL, W., M.B., C.M., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

CURLING, W., L.R.C.P.L., M.R.C.S.E., has been appointed an Hon. Surgeon to the Ramsgate and St. Lawrence Royal Dispensary.

DAVY, R., F.R.C.S., has been elected Surgeon to the Westminster Hospital vice G. Legge Pearse, F.R.C.S., resigned.

DOYLE, J., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Kilkenn Dispensary District of the Enniscorthy Union, vice Dyas, resigned.

EDDOWES, A., M.B., C.M., has been appointed House-Surgeon to the Salop Infirmary, vice H. J. Rope, resigned.

EDWARDS, H., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Heo Union and the Workhouse, vice Applin, resigned.

FORD, T. H., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Junior House-Surgeon to the West London Hospital, Hammersmith, vice Webber, promoted.

FORRESTER, J. S., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Resident Surgeon to Chalmers' Hospital, Edinburgh.

GEBALLY, J. W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Lettermore Dispensary District of the Oughterard Union, vice Griffin, resigned.

HICKS, R., M.R.C.S.E., has been appointed a Consulting Surgeon to the Ramsgate and St. Lawrence Royal Dispensary, on resigning as Surgeon.

HILLS, T. H., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Medical Officer to the Ramsgate and St. Lawrence Royal Dispensary, and House-Surgeon to the Ramsgate Seamen's Infirmary, vice Gunning, resigned.

HOMAN, G. W., M.R.C.S.E., has been appointed House-Physician to King's College Hospital.

HUTCHINGS, A. C., M.R.C.S.E., has been appointed Resident Accoucheur to King's College Hospital.

JONES, J. J., M.B., C.M., has been appointed Medical Officer to the Port Talbot Tin Works, near Taibach, vice Phillips.

LILL, W. P., M.B., M.R.C.S.E., has been appointed House-Surgeon to the General Dispensary, Lincoln, vice Wilkinson, resigned.

LINDSAY, A., M.B., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Morland District of the West Ward Union, Westmorland, vice Brown, resigned.

M'CORMACK, M. P. C., L.A.H.Dub., L.M., has been appointed Resident Medical Officer and Apothecary to the Dublin Provident Infirmary and Dispensary.

MASON, F., F.R.C.S.E., has been appointed a Consulting Surgeon to the St. Pancras and Northern Dispensary, vice Bishop, deceased.

MITCHESON, Mr. J. H., has been appointed House-Surgeon to the London Hospital.

MOSS, J. H., L.R.C.P.Ed., M.R.C.S.E., has been appointed Surgeon to take charge of expedition to Northern Coast of Australia and adjacent Islands, Australian Fishery Company, Limited.

MORGAN, T. C., L.K.Q.C.P.I., L.R.C.S.Ed., has been appointed Curator to the Royal London Ophthalmic Hospital, vice Nettleship, resigned.

PAGE, J. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Assistant House-Surgeon to the North Dispensary, Liverpool, vice Donovan, promoted.

STUDDERT, O., B.A., M.D., F.R.C.P., has been appointed Assistant-Physician to the Hospital for Sick Children, Great Ormond-street, Queen-square, vice J. Murray, M.D., deceased.

TICHBORNE, C. R. C., M.R.I.A., F.C.S., has been appointed Lecturer on Chemistry at the Carmichael School of Medicine, Dublin, vice Campbell, appointed Professor of Chemistry at the Catholic University.

TIDY, C. M., M.B., has been appointed Public Analyst for Bethnal-green: £31 per annum, and 7s. 6d. per analysis.

TINLEY, T., L.R.C.P.Ed., L.F.P. & S.Glas., has been appointed Medical Inspector of Vessels arriving at Whitby from infected foreign ports.

WADE, A. L., B.A., M.B., L.R.C.S.I., has been appointed Surgeon to the Royal Isle of Wight Infirmary.

WALFORD, E., M.R.C.S.E., has been appointed an Hon. Surgeon to the Ramsgate and St. Lawrence Royal Dispensary.

WEBBER, W. L., M.R.C.S.E., has been appointed Senior House-Surgeon to the West London Hospital, Hammersmith, vice Sobey, resigned.

WOODMAN, S., L.R.C.P.L., M.R.C.S.E., has been appointed a Consulting Surgeon to the Ramsgate and St. Lawrence Royal Dispensary, on resigning as Surgeon.

WYLLIE, W., M.D., has been appointed Medical Officer for the Kirkby Lonsdale District of the Kendal Union, vice Whitaker, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BARWELL.—On the 5th inst., at George-street, Hanover-square, the wife of R. Barwell, F.R.C.S.E., of a daughter.

COOKE.—On the 30th ult., at Woburn-place, Russell-square, the wife of T. Cooke, F.R.C.S.E., of a daughter.

FISHER.—On the 2nd inst., at Bawtry, Yorkshire, the wife of George Fisher, M.R.C.S.E., of a daughter.

MILNE.—On the 26th ult., at The Manse, Mount Pleasant, Ferryhill, Durham, the wife of Thomas Milne, M.D., L.R.C.P.Ed., L.F.P. & S. Glas., Surgeon Royal Navy, of a son.

MOLLOY.—On the 29th of Sept., at Ascension, the wife of Gerald Molloy, Staff Surgeon 2nd Class R.N., of a son.

MYLES.—On the 3rd inst., at Abbeyshrule, the wife of John Thos. Myles, L.R.C.P.Ed., of a daughter.

MARRIAGES.

ASHBY—HAIGH.—On the 6th inst., at St. John the Evangelist's, Cheetham, near Manchester, Alfred Ashby, M.E., F.R.C.S., of Grantham, youngest son of the late Frederick Ashby, Esq., of Staines, to Helen, second daughter of the late Henry Haigh, Esq., of Temple House, Cheetham-hill, Manchester.

HAMILTON—NUTT.—On the 6th inst., at St. Augustine's, Highbury New-park, Thomas Hamilton, M.B., to Helen, daughter of J. W. Nutt, Esq.

DEATHS.

COOKE.—On the 8th inst., Augustus Cooke, L.S.A.L., of Dover-terrace, Camberwell, late of Denmark-hill, aged 70.

DOBIE.—On the 5th inst., at Ampthill-square, R. Dobie, M.R.C.S.E., Surgeon R.N., aged 80.

KAY.—On the 9th inst., at Old-street, St. Luke's, John Kay, Esq., Surgeon, in his 62nd year.

LOVE.—On the 29th ult., G. Love, M.R.C.S.E., of Wimbledon, aged 53.

SCOTT.—On the 5th inst., at Albany-street, Edinburgh, Dr. Daniel Scott, Inspector-General of Hospitals, Hon. Physician to the Queen.

SKINNER.—On the 5th inst., James Skinner, Surgeon, of Sherrington Manor House, near Lewes, aged 87.

WHITE.—On the 12th inst., at Hanover-square, John White, Esq., formerly Medical Storekeeper at Madras.

YOUNG.—On the 26th ult., at Gosport, John Eldon Young, M.D., Surgeon-Major H.M.'s 18th (the Royal Irish) Regiment, aged 44.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments).

THE LANCET OFFICE, NOV. 13TH, 1873.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
Nov. 7	29·58	W.	44	45	...	54	42	0·10	Overcast
„ 8	29·95	N.E.	44	45	...	51	42	0·10	Overcast
„ 10	30·11	S.E.	47	48	...	44	42	0·09	Overcast
„ 11	30·30	S.E.	43	44	...	47	42	...	Overcast
„ 12	30·08	N.E.	36	38	...	46	36	...	Overcast
„ 13	29·92	S.E.	34	34	...	...	32	...	Foggy

Notes, Short Comments, and Answers to Correspondents.

YELLOW FEVER AT SHREVEPORT, LOUISIANA.

SHREVEPORT is the second city of Louisiana, the great trade centre of the Red River Country, and its population is estimated at from ten to thirteen thousand. This city was not long ago visited by a frightful epidemic of yellow fever, which, according to the *Philadelphia Medical Times*, drove away one-half of its population, and killed ten per cent. of the remainder. The visitation may, it is said, be ascribed to the total neglect of all sanitary rules. The city is about fifteen miles below the great Red River raft, which turns the water of the river over the adjacent country. The country around the city is a succession of marshes and swamps; but, spite of these sources of malaria, the health of the city has generally been good. Still this is the third visitation of yellow fever. Owing to political causes there had been no regular municipal government at Shreveport, and the city became in a very filthy condition, added to which a Texan boat with cattle sank in the Red River, and the bodies of the dead animals were allowed to putrefy on the shore.

A Surgeon-Major (Aldershot) will find the information he requires in the third chapter of Livingstone's Narrative of his Expedition to the Zambesi. Our correspondent will find the remarks on the fevers incidental to the East Coast of Africa deserving of his attention, and we shall allude to them in our next issue.

House-Surgeon should not have acted without the order from the coroner. The coroner was not the less to blame for not holding an inquest. In the second case, only a low and narrow view of the object of a coroner's inquiry would lead him to dispense with a post-mortem.

Poplar.—Apply to the Secretary of the institution.

ROME.

Surtout point de zèle, Talleyrand's *mot*, seems to be thrown away on Italian Sindachi. Instead of those sanitary arrangements which take the form of drainage, pure water-supply, and ventilation, they insist on establishing fumigation halls at the chief railway stations, where every luckless passenger is subjected to a vapour-bath of chlorine. At Rome the conscientious care with which Sindaco Pianciani enforces this precaution threatens to cause an epidemic of bronchitis, and a deflection of the stream of tourists to other less severely visited places. Man, woman, and child, the moment of their arrival at the Roman terminus, are pounced upon, conducted to the fumigation hall, and there put through the disinfecting ordeal. The neutralisation of phantom fever-fomites or cholera-germs is accompanied by such a storm of sneezing, coughing, and expectoration, that the yet unvisited bystander is apt to show fight when his turn comes, and more than once such a scene has occurred that the fumigating myrmidons have been forced to give up the attempt—*re infecta*; certainly not *disinfecta*. The uselessness of "disinfectant agents" against an epidemic has not yet been realised in Rome, where the municipality is capable of doing what certain authorities have proposed against the cattle plague—the tying of cloths saturated with carbolic acid to the horns of the cattle! Romans have blamed THE LANCET for frightening visitors away by pointing out the insanitary conditions of the city and the excess of deaths over births. Their Syndicate is adopting the best means to effect what they accuse us of attempting. Geese once saved the Capitol. The unfeathered variety of the same order will not succeed by substituting for the cackle of the former the sternutation and exsecration of their chlorinised fellow-creatures.

Mr. G. A. Kenyon, (Chester.)—The tablets which we have seen and tried consisted of compressed tea. The tablets are made up of tea of different price and quality; and, if we may judge from the quality of the cakes obtained by us, the tea when prepared with boiling water is very good.

D. R. M., (Dundee.)—1. For all thoroughfares the most effective as well as the cheapest disinfectant is Cooper's Salts.—2. There is no adequate work on Tea Analysis.—3. Pettenkofer on Air, translated by Dr. Augustus Hess.

A Father.—Many thanks. We have given the subject some anxious consideration.

THE FLY IN ITS SANITARY ASPECT.

To the Editor of THE LANCET.

SIR,—It is much to be regretted that the remarks which appeared in your columns last summer, and the recent observations of Professor Leidy, of America, on the probable conveyance of contagious diseases by *flies*, have not attracted that attention from the profession which the importance of the subject deserves. As the necessity for inquiry into the nature of the media concerned in the direct transfer of contagion is at the present time being so strongly asserted, the following coincidences, as ascertained by observation, may perhaps be considered not unworthy of publication, if only for the purpose of indicating the possible, not to say probable, transfer of contagion in the above manner, and of attracting notice to a question which would appear to deserve, as well as admit of, a complete investigation.

In 1849, on an occasion of going through the wards of the Malta Hospital, where a large amount of Asiatic cholera was under treatment, my first impression of the possibility of the transfer of the disease by flies was derived from observation of the manner in which these voracious creatures, present in great numbers, and having equal access to the dejections and food of the patients, gorged themselves indiscriminately, and then disgorged themselves on the food and drinking utensils.

In 1850, the *Superb*, in common with the rest of the Mediterranean squadron, was at sea for nearly six months, during the greater part of which time she had cholera on board. On putting to sea the flies were in great force; but after a time the flies gradually disappeared, and the epidemic slowly subsided. On going into Malta harbour, but without communicating with the shore, the flies returned in greater force, and the cholera also with increased violence. After more cruising at sea, the flies disappeared gradually with the subsidence of the disease.

In the cholera years 1854 and 1866 in this country the periods of occurrence and disappearance of the epidemics were coincident with the fly season;* and the occurrences of cases of the disease which came under my notice were associated in every instance with the presence of flies in the rooms of the patients, the proceedings of the flies being such as to warrant the charge preferred against them.

In addition to these matters of observation, I would remark that what may be called the *fly* theory of the propagation of contagion is not at variance with any other theory, and that its applicability is seen wherever flies have at once access to the morbific products of disease and to human food. Thus the diarrhœa season is generally believed to be associated with the fruit season, and perhaps justly so; but then it is the fly season also, and the fruit may not be *per se* the cause, but only the vehicle of the poison communicated to it by the fly. Thus also as regards the outbreak of typhoid in Marylebone, it would not seem unreasonable to suppose that the contagion was conveyed by flies to the milk directly, rather than by the round-about route indicated by the addition to the milk of water which had derived its poison from sewage after having undergone filtration through sixteen feet of earth!

In conclusion, the house-fly is supposed to be one of the most useful servants of the sanitarian, and has generally obtained credit, if not for doing much good, at least for the possession of habits of a harmless character. A searching inquiry into those habits, however, will, I think, result in the conviction, which I have held for many years (in common, no doubt, with others), that flies are carriers of contagion, and form one of the most, if not the most, common and direct means of the propagation of contagious diseases. I remain, Sir, your obedient servant,

G. E. NICHOLAS, M.D.,
Wandsworth, October, 1873. Medical Officer of Health for Wandsworth.

* The progress of the great plague of London would appear to have corresponded with the fly season.

THE SPANISH IMBROGLIO.

REPUBLICAN and Royalist in Spain have a deadlier enemy to encounter than each other. In the nor h the bitterly cold and damp weather tells severely on the soldiers of either side, wretchedly and thinly clad as they are. The Republicans are worse off than the Carlists in respect of ambulances—the fanaticism of Holy Mother Church having supplied to the hospitals of the latter as effective reinforcements as it has given to the ranks. According to private correspondence, cold and exhaustion cost both sides more men than the heaviest engagement. Count de Reichmont, whose volunteered services in the hospitals during the late Franco-German war are well known, has gone to Spain, and has succeeded in establishing two ambulances. Both are insufficiently manned, and in urgent need of nurses, medicines, clothing, and food. The Count de Reichmont is now on a brief visit to London to enlist the aid of the Societies whose services proved so effective in the late war.

Enquirer.—The admission to the Medico-Chirurgical Society is by ballot. There are three elections annually. The admission fee is £6 6s.; the annual subscription, £3 3s., but fellows residing beyond three miles from London pay no subscription. The admission to the Obstetrical Society is by ballot; the subscription for town and country members alike is one guinea. For further particulars apply to the Secretaries.

Mr. W. H. Sherlock.—It is contrary to our rule to comply with our correspondent's request. Why does he not take the opinion of his usual medical attendant as to whom he should consult?

Dr. de Renzy, (Punjab.)—Thanks. The returns shall receive attention next week.

QUARANTINE.

To the Editor of THE LANCET.

SIR,—Can you inform me what is the real meaning or significance of the word *communication* in the laws of quarantine? Here is a healthy ship arriving at a port known to be infected with cholera, and although no one from shore is allowed on board, yet stores and provisions coming from the midst of the infected province are freely taken, and on arrival at an unaffected port "communication" is declared *not* to have been held with the former port. I fancied that after the International Cholera Commission held some years ago at Constantinople, something definite regarding the laws of strict quarantine might have been made known to the sanitary authorities at home and abroad, and I believe in the above case communication was undoubtedly held. Yours truly,

Brindisi, Aug. 24th, 1873. NAUTICUS.

*** The International Sanitary Conference concluded, among other things, *apropos* of disinfection in relation to quarantine as to cholera, that: 3. "Elle s'applique en outre aux marchandises supposées contaminées, telles que les drilles, les chiffons, les peaux, les cuirs, les plumes, et autres débris animaux, ainsi que les laines et autres substances non emballées provenant d'un lieu infecté ou d'un navire sujet lui-même à la disinfection. Les lettres et dépêches seront enfermées dans une boîte et disinfectées par le dégagement de chlore sans être percées. Quant aux marchandises en général, sortant des fabriques et bien emballées, elles sont reputées non contaminées et consequemment non sujettes à la disinfection. 4. Enfin la disinfection s'applique aux animaux vivants par l'aération ou l'immersion dans l'eau, lorsque les autorités sanitaires le jugerant convenable." The communication referred to by our correspondent probably came within the exemption set forth in the above conclusions, and, if this be the case, would not be held to be a "communication" in the quarantine sense of the word.—ED. L.

Junior Practitioner.—Either all the medical men should be on the Committee, or the medical superintendent should be on it. He should be chosen by the medical men. The patient should have full choice, and it should be enough that his case is approved for admission by any one of the medical staff. There has been a want of co-operation in the matter.

Dax.—The guardians are not bound to pay a fee for the operation. Such cases, not being urgent, and admitting of being sent to a hospital, are not considered cases for extra fees.

THE communication of *Mr. J. Ashburton Thompson* on "Pharmaceutical Preparations of Phosphorus" shall be inserted shortly.

LAUDANUM POISONING.

To the Editor of THE LANCET.

SIR,—Dr. Hartley deserves the thanks of the profession for publishing his case of poisoning by laudanum. In a case in my own practice (recovered) sulphate of zinc, even in large doses, had no effect whatever; while mustard acted immediately. But I should like to know—and perhaps Dr. H. will be so kind as to state—on what principle so large a quantity of tincture of belladonna was administered in such a case. Perhaps also he would mention the precise quantity given. Yours faithfully,

November 8th, 1873. A COUNTRY PRACTITIONER.

AN APPEAL TO THE BENEVOLENT.

WE are asked to make an appeal on behalf of Mrs. Mann, the widow of a surgeon, now in great distress at 28, Langham-street. The Rev. Mr. Gleadall, Preacher at the "Foundling," certifies to the urgency and worthiness of the case. We shall be happy to receive subscriptions for the poor widow.

C. S. C. H.—The legality of such a bond may be questioned; but morally it may be binding on any gentleman who became a party to it.

Mr. P. J. Williamson, (Belfast.)—Yes; a short History of Medicine was written by Dr. D. M. Moir, of Musselburgh, N.B.

An Old Subscriber is in error. The qualifications do not entitle their possessors to the use of "Dr."

A HINT FOR THE WAR OFFICE.

A Medical Officer writes to us from the Gold Coast that, while the officers in Sir Garnet Wolseley's staff are receiving one guinea a day, additional to their rate of pay to which they are entitled, with an advance of six months' field allowance, the medical officers are only to be permitted to draw the double pay granted to them by the Warrant whilst serving on the Gold Coast. We have always understood that every officer proceeding on active service was entitled to several months' field allowance in advance, and we cannot believe that it is the intention of the authorities to depart from the regulated allowance in this respect on the present occasion.

Philanthropist, (Belfast.)—The plan for restoring the apparently drowned advocated by Dr. Benjamin Howard, of New York, was described in *Land and Water* in March last. The description was abstracted from the Journal of the Lifeboat Institution, and the chief features of the plan were reproduced in THE LANCET of March 1st of the present year.

Mr. C. A. Cox.—The coroner, if very liberally disposed, might give a fee in such a case; but there is law enough to support him in refusing it.

S. T., (Greenwich.)—Consult any respectable surgeon.

"AN ENLIGHTENED PICANTRY."

To the Editor of THE LANCET.

SIR,—As a reader and admirer of THE LANCET for the last forty years, I was sorry to see in your "annotations" of Nov. 1st what I conceive to be an unworthy fling at my poor and heretofore down-trodden country. I confess that, as an Irishman, I was stung by the paragraph in THE LANCET, and cannot but express my regret that the writer did not take the trouble of becoming better informed on the present state of Ireland before he ventured to assail the peasantry of a nation. The paragraph about which I write would make it appear to the readers of THE LANCET (and what part of the civilised world is THE LANCET not read?) that the peasantry of Ireland are at the present time either breaking each other's heads, or shooting their landlords; whilst we have it on the undisputed authority of the public journals, on the evidence of judges of assize, and on the published statistics of crime in Ireland, that a more peaceable country is not to be found on the face of the globe at present. That the peasantry of Ireland have proved over and over again a little troublesome to some of their neighbours, more especially to Master Johnny Bull (who we all here think often deserved it), and even occasionally potted a bad landlord, I cannot deny; but now, under better laws, and a nearer approach to the spirit and the letter of the British constitution, which we never had in Ireland, I maintain that the present improved state of the country did not warrant the publication of such an article.

I am, Sir, your obedient servant,

Cork, November 5th, 1873. J. F. MACEVERS, M.D.

*** We are sorry to have offended the national susceptibility of Dr. MacEvers. While commending the spirit which prompted him to write the above letter, we are bound to add that his position is untenable. The public journals whom he cites to maintain his contention record, alas, nearly every week the commission of an atrocious and cold-blooded murder; while the "judges of assize" whom he quotes have sometimes to be protected by the military in the discharge of their high functions, as in the late case of Mr. Justice Keogh. Dr. Hancock's recent report is, on the whole, encouraging; but a perusal of Irish criminal statistics would be more satisfactory if there were evidence that the perpetrator of a murder in broad daylight could be detected, or that the equally guilty aiders and abetters could be reached. In no other section of the empire does the sacred majesty of the law require to be vindicated with ball-cartridge, or her behests to be enforced by dragoons.—ED. L.

Indophilus.—It is remarkable that the great famines in India have not been followed by the peculiar febrile epidemic by which similar visitations are succeeded in Europe.

A Sufferer would find it by far the shortest and safest course to consult some respectable surgeon.

Observer.—The case has been noticed before, if we mistake not. The University of Glasgow should move in the matter.

Margaret Wardle.—We regret that we cannot publish the appeal.

HABITUAL CONSTIPATION.

To the Editor of THE LANCET.

SIR,—I have an adult male patient who has been the subject of habitual constipation for many years. I have tried brown bread, cold enemata, soap suppositories, belladonna, and strychnia; each of these had a beneficial effect for a short time, but are now useless. He is obliged to take an aperient every third day at least; if he fails to do so he suffers from headache and a tendency to piles. He leads an active life, taking a good deal of walking exercise, and is, with the exception of constipation, very healthy. From the size of the evacuations it is evident that there is no stricture. There appears to me to be a want of tone in the colon. Can any of your readers suggest a remedy? I think it is possible that some form of electricity or galvanism might stir up the sluggish muscular coat of the large intestine; but I do not know what kind of apparatus would be suitable, or how it should be applied. It is necessary that the machine should not be costly, and that it should be capable of self-administration. Yours obediently,

November, 1873. COLON.

G. A. S., (Shanklin.)—THE LANCET for October 22nd, 1870, contained an article on the Outbreak of Yellow Fever in Barcelona in the summer of that year.

THE WILIKADA GAOL, CEYLON.

THIS subject shall have our attention next week.

Mr. D. E. M. can have no difficulty in securing proper treatment of his case by consulting any surgeon of respectability. We cannot forward private answers.

WE should be glad of any good report of the matters in dispute between Mr. Kent and the guardians of Kingston.

A Physician, (Birmingham.)—The speech in question was *not* made "at a meeting of the Midland Medical Society." After the meeting was over, some of the members sat down to supper; when Sir Henry Thompson's health was given by Mr. Gamgee, whose speech it is only necessary to read in order to see that some allusion in reply to the subject of the Emperor's case was necessary; otherwise Sir H. Thompson would probably not have named the subject. It did *not* relate, however, "to the manner of death of the Emperor." It was the management of the case, and the French criticisms, said "to be severe," which had been dilated on. Sir H. Thompson simply replied, without any careful choice of terms, that the particulars of *any* person's case were sacred until some reason to the contrary existed for making them public, and he rejoiced that such was the universal practice of the profession; and when he referred to the exceptional instance of the Emperor's case being probably made public at some future time, it was simply because the publicity had been promised by the Emperor's physicians.

An Army Surgeon will receive double pay whilst serving there, and he should apply to the Director of Clothing about equipment.

Mr. S. W. Coombes.—Apply to the Secretary.

L. B. J.—It is curable, and we recommend our correspondent to consult some respectable surgeon, and shun all quacks.

X. Y. Z.—Apply to Messrs. Macmillan.

An Enquirer.—The degree does not entitle him to sign himself "surgeon" unless he possesses another qualification.

Medicus.—Our correspondent should have given his name.

Dr. Doose's paper shall receive attention.

MEDICAL GUARDIANS AND WORKHOUSE MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—I was surprised to see a letter in your issue of Nov. 1st, with the above heading, sent by Mr. Barnes. The facts of the case are simply these: As a guardian I am bound to visit the house once a week, when the case of this child came under my notice. Being a medical man, it naturally interested me, and each week I noted for my own observation any change either for better or worse. The subpœna was left at my house during my absence by the detective who arrested the parents, and I was bound to attend at the Police Court and give evidence. I did not attend the child professionally, neither have I in any case interfered with Mr. Barnes's treatment. It would have been more gentlemanly on Mr. Barnes's part to have called and asked for an explanation than to have written to THE LANCET when he was in ignorance of the facts of the case.

I remain, Sir, yours faithfully,

St. Aubyns, Cliftonville, November, 1873. W. H. HARDING.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Pettigrew, Edinburgh; Prof. Attfield, London; Dr. Bucknill, Rugby; Mr. Paul, Bristol; Mr. Hyett, Painswick; Dr. Rugg, London; Mr. Parker, Lewes; Mr. Oldham, Northampton; Mr. Swineton, Newcastle; Mr. W. P. Pinder, Westgate; Mr. Hyde, Witney; Mr. Hankey, Leeds; Mr. White, Oldham; Mr. J. Baynes, Dalston; Mr. J. Whittall, Oxford; Mr. George, Dublin; Dr. Cross, Bideford; Mr. Nelham, Poplar; Mr. B. L. Tandy, Birkenhead; Mr. Breach, Newbury; Mr. Parker, York; Mr. Hurley, Ross; Mr. Ashby, Staines; Mr. Furby, Ramsay; Mr. G. H. Morton, Godalming; Mr. Carthy, Cork; Dr. Nesbett, Cannes; Mr. Groves, London; Dr. Barbour, Dover; Mr. Deebing, Southend; Mr. Roberts, Birmingham; Mr. Moore, Robertsbridge; Mr. Hill, Boston; Mr. Weale, Carlisle; Mr. Williams, Talgarth; Mr. Creery, Portsea; Mr. Gale, Stafford; Mr. Eastes, London; Mr. Tily, Richmond; Mr. Freeson, Oldham; Dr. Webster, Shenandoah Town, U.S.; Mr. Grayson, Blue Town; Mr. Kenyon, Chester; Mr. R. Hurley, Halifax; Dr. Hutcheson, Greenock; Mr. C. Quinton, Grosmont; Mr. B. Rowland, Tiverton; Mr. Hewetson, Leeds; Mr. J. Broad, Portland; Mr. Sheppard, Towcester; Mr. Felton, Harwich; Mr. Pletts, Ryde; Mr. Hill, London; Dr. Maskew, Lyndhurst; Mr. Fisher, Bawtry; Mr. P. B. Pring, Glasgow; Mr. Wharton, Dublin; Dr. Peacock, Bolton; Mr. J. Service, Jarrow-on-Tyne; Mr. Stephens, Bradford; Mr. Swain, Devonport; Mr. R. Neild, Louth; Mr. Harding, Cliftonville; Mr. Grieve, Reading; Dr. Meadows, London; Mr. Banfield, Epsom; Mr. P. Davies, Maidstone; Mr. J. Clarke, Ferryhill; Dr. Von Cavania, London; Mr. Harris, Birmingham; Mr. Hill, Leith; Mr. Brown, Wandsworth; Mr. Dowse, Highgate; Dr. Guppy, Falmouth; Mr. Coates, Tirhony; Mr. Eddowes, Shrewsbury; Mr. Marley, Derby; Mr. Bell, Wigan; Mr. Hendley, Bedford; Mr. Gibson, Manchester; Mr. Ryott, Newbury; Dr. MacEvers, Cork; Mr. C. Sprague, Kimbolton; Dr. Dobson, Windermere; Mr. Dean, Wakefield; Mr. Thompson, London; Mr. Jacob, Dublin; Dr. Milne, Ferryhill; Mrs. Wardle, Highfield; Dr. Duncan, Aberdeen; Mr. Dickson, London; Mr. Balfour, London; Mr. Sherlock, London; Mr. R. Colmore, Lichfield; Mr. B. Wallis, Leek; Mr. South, Cork; Mr. Field, Swansea; Mr. King, Bolton; Mr. Henley, Cromer; Mr. Brown, Portree; Mr. Werth, Dorchester; Mr. B. Thomas, Glasgow; Mr. Mann, St. Ives; Mr. Square, Plymouth; Mr. T. Atchison, London; Mr. Mayhew, Glastonbury; Dr. Leitch, Silloth; Mr. Hoffman, Bow; Mr. Birch, London; Mr. Carhill, Horsham; Mr. Morris, London; Dr. Dougall, Glasgow; Mr. Whittle, Liverpool; Mr. Darkey, Barmouth; Mr. Andrews, Guildford; Dr. Webster, Golcar; Mr. Coombs, Worcester; Dr. Gray, Oxford; Mr. Graham, Stirling; Mr. Keetley, London; Mr. Jones, Ruthin; Mr. Cowell; Mr. Bellamy; An Old Subscriber; L. B. J.; Colon; A Health Officer of Seven Years' Standing; A Country Practitioner; S. T.; Enquirer; D. E. N.; E. F.; Medicus; An Army Surgeon; &c. &c.

African Times, Hackney Gazette, Liverpool Albion, Indian Medical Gazette, Carlisle Journal, Ceylon Times, Belfast Evening Telegraph, Huddersfield Examiner, Ladies' Own Journal, Penrith Observer, and *Lincoln Gazette* have been received.

Medical Diary of the Week.

Monday, Nov. 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations on the Eye, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON (11, Chandos-street, W.)—8 P.M. Mr. Thos. Bryant, "On a Case of Intestinal Obstruction and Gastrotomy."—Mr. Wm. Adams, "On the Growth of Cicatrices from Wounds made in Early Life, and the supposed wearing out of some Cicatrices."—Mr. Spencer Watson, "On a Case (with Patient) of Cicatrix after Burn treated by Plastic Operation."

Tuesday, Nov. 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8 P.M. The following Specimens will be exhibited:—Mediastinal Tumour in Exophthalmic Goitre; Nerve showing the effects of an Injury inflicted many years previously; Specimens of Disease of the Brain and Spinal Cord; Intestinal Obstruction and Œsophagotomy in a Bird; Traumatic Aneurism in a Bird; Lymphoma infiltrating the Trachea, in which Tracheotomy was performed twice; Large Abscess of the Liver without Ulceration of Intestine; Two Cases of Osteoid Cancer of the Lung; &c. &c.

Wednesday, Nov. 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
CANCER HOSPITAL.—Operations, 3 P.M.

Thursday, Nov. 20.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 3 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
HARVEIAN SOCIETY OF LONDON.—8 P.M. Dr. Farquharson, "On a Case of Habitual Constipation."—Mr. Penning Baker, "On a Case of Enlarged Prostate."—Mr. W. F. Teevan, "On Retention of Urine from Diseased Prostate."

Friday, Nov. 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
MEDICAL MICROSCOPICAL SOCIETY.—8 P.M. Dr. M. Bruce, "On Inflammation."—Mr. Needham: "An Improvement in Dr. Rutherford's Microtome."—Mr. Chippingdale, "On a Spectroscope."

Saturday, Nov. 22.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 2½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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